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BY

PRESIDENT SCHURMAN

1919-1920

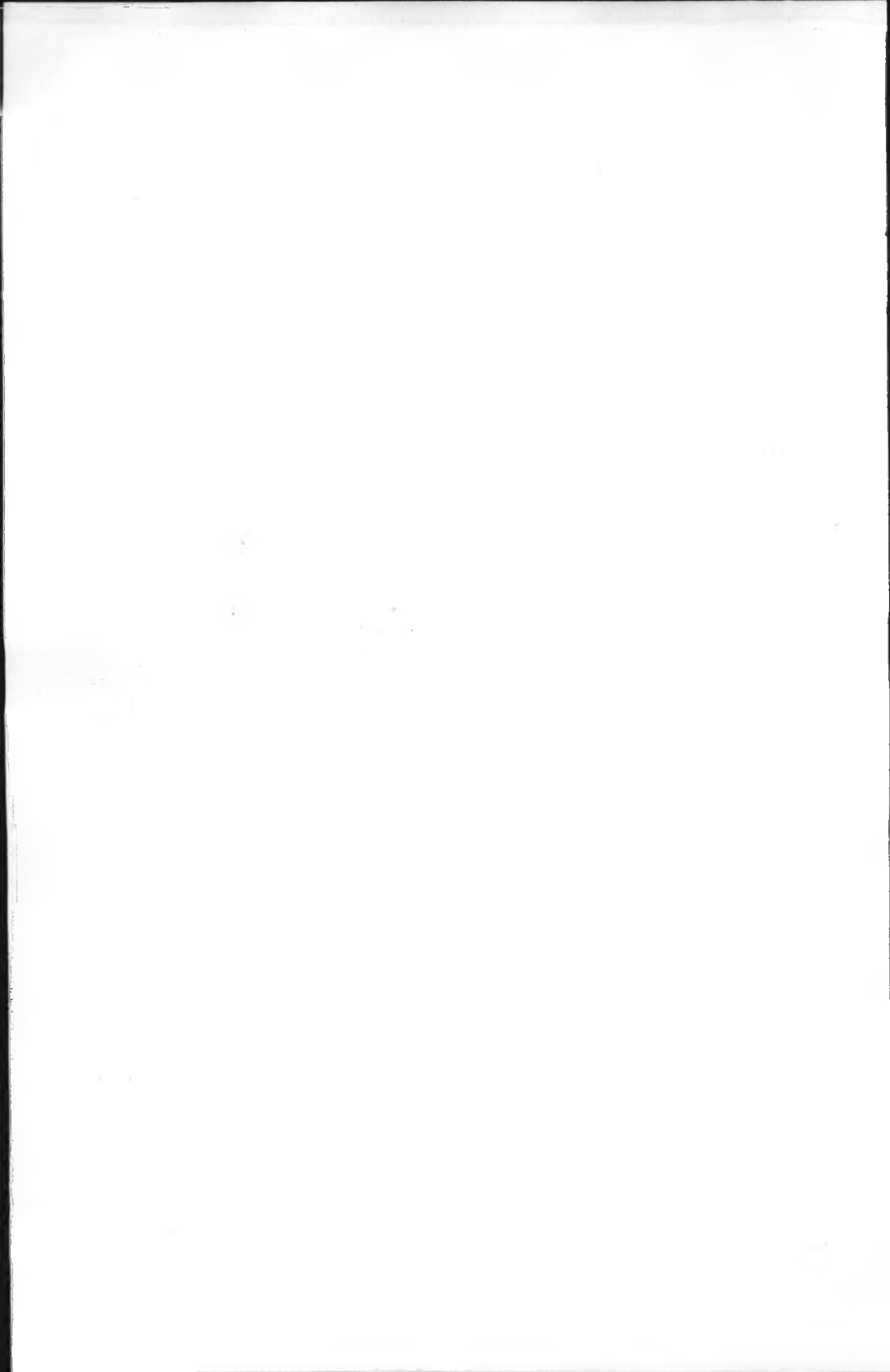
WITH THE COMPTROLLER'S REPORT, AND REPORTS OF THE DEANS
OF COLLEGES, THE REGISTRAR, THE LIBRARIAN
AND OTHER OFFICERS

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Forms for bequests to Cornell University will be found at the close of the Comptroller's Report, page 59.

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PRESIDENT'S REPORT

FOR 1919-1920

TO THE BOARD OF TRUSTEES:

I have the honor to present the President's Report for the year 1919-1920. The twenty-eighth consecutive annual Report since my election to the Presidency in 1892, it will also be my last. Instead, therefore, of merely chronicling the events of the year I will, in the language of Bacon's *Advancement of Learning*, "now attempt to make a general and faithful perambulation" of the University, with brief comments on its condition and operations and also on the agencies and instrumentalities through and by which it performs its functions.

THE DEVELOPMENT OF THE UNIVERSITY

It has been to me a source of the highest satisfaction to have witnessed, and to have had something to do with, the growth and expansion of the University for more than a quarter of a century.

In the 80's we used to count our students by the hundreds. In 1882 there were 384; in 1919-1920 the total number of persons who received instruction at the University was 7711, of whom 5765 were regularly matriculated students enrolled between September and June. The University has also become a genuine *studium generale*, students coming to it from practically every State in the Union and every continent on the globe.

As I have been in the habit of saying, the educational ideal of Cornell University has been to combine the idealism of ancient Athens with the industrialism of modern America. To the great throngs of students who have frequented its halls it has given both liberal and practical education, fitting them to earn a livelihood and also to live a worthy life. Its graduates are men of intelligence and culture and also men of action and skill in practical affairs. These constitute, as it were, the educational record of the University. They are "our epistles known and read of all men." By them the public judge the quality of the instruction and training given at Cornell. And the ever-increasing popularity of the University has been gratifying evidence as to the character of the estimate which the public has formed of it.

Of all the degrees conferred by Cornell University (21,445) more than seven-eighths have been conferred since I became President in 1892. From the foundation of the University to 1892 inclusive the total number of degrees granted was 2453. Since that time the number of degrees conferred has been 18,992. And of all Cornell undergraduates who withdrew from the University for one reason and another without receiving degrees, it is estimated that a proportion corresponding to the graduates falls within the period of my incumbency of the presidential office.

To be the head of this large family of Cornellians has been to me a source of the greatest pride and pleasure. One of the most enjoyable things in my long term of service has been my frequent meetings with them, formal and informal, in different parts of the country. There is no other group of men and women in whose career and service and success and welfare I have been and am so deeply interested.

I have witnessed also a corresponding enlargement of the faculty. While the funds held by the Trustees have not always permitted us to multiply professorships in harmonious balance with instructorships, it has been a constant gratification to me to see for so many years such able young men attracted to the teaching staff. In addition to their regular work as teachers, both instructors and professors have as a rule zealously engaged in research, with the result of establishing a high reputation for the faculty in the republic of science and letters. There are to-day among our professors a goodly number of eminent scholars and scientists, some of whom have an international reputation.

It has fallen to me also to organize the staff of instruction and student body so as to keep pace with the multiplication of their numbers. Special colleges and faculties have been differentiated, with special curricula in which teachers and students have been brought together with something of the closeness and intimacy of relation that characterized the independent college of earlier days. In 1892, there was one general faculty for the University to which a small department of law had recently been added. In 1919-1920, besides the general faculty (which has become a sort of *senatus academicus*) the University embraced eight special colleges and faculties for undergraduates and a graduate school open only to those who have received their first degrees and who desire to pursue advanced and specialized instruction.

On the material side I have seen a great expansion of the University. The buildings, which three decades ago you could count on your

fingers, are now numbered by scores; and the grounds, then limited to two hundred acres, have since expanded to 1456 acres.

I have seen the University treasury enriched by many splendid benefactions. Postponing for later mention the millions of dollars received from the State of New York for agriculture and veterinary medicine, I here name some generous individual benefactors. Henry W. Sage in successive donations in the 70's, 80's, and 90's, bestowed upon the University gifts of nearly a million and a quarter of dollars for the Library, the School of Philosophy, and other objects which bear his name; and his sons, Dean Sage and William H. Sage, followed his generous example in establishing later the Infirmary, the Professorial Pension Fund, etc., in gifts together aggregating \$385,000. Goldwin Smith left his estate of nearly three quarters of a million dollars for the promotion of the humanities and liberal arts. Colonel Payne established the Medical College in New York City with donations for building and endowment aggregating about six million dollars. George F. Baker, with a gift of three beautiful stone buildings costing \$358,249.24, inaugurated the new system of residential halls for men students. Mrs. Russell Sage provided a beautiful residential hall for women students at a cost of \$300,000. Willard Fiske bequeathed to the Library a fund of over five hundred thousand dollars, having given to it in his lifetime the invaluable Dante and Petrarch collections. Hiram W. Sibley followed the example of his father, Hiram Sibley, in providing halls for instruction in mechanical engineering. F. W. Guiteau and his sister, Mrs. Howe, gave to the University a Student Loan Fund which to-day amounts to \$350,915.65. John Stambaugh of the class of '84 endowed a professorship of History with a gift of \$100,000. With an endowment of \$100,000, Jacob H. Schiff established a foundation for study and instruction in the field of human civilization. At the June Commencement, 1919, I had the pleasure of announcing that the University had received from an anonymous benefactor a gift of \$1,500,000 for the erection of a new laboratory of chemistry, and at the June Commencement, 1920, that August Heckscher had made a gift of \$500,000, to establish a Foundation for the Promotion of Research at Cornell University. For a good many years past I have had the satisfaction of seeing the alumni and old students making, through the Cornellian Council, generous gifts toward the annual maintenance of the University. And the year just closed has witnessed the culmination of their generosity, with some aid from others, in the subscription of over five mil-

lion dollars toward the Semi-Centennial Endowment Fund, the income of which, I rejoice to repeat, is to be used for the raising of professorial salaries.

I have been sketching, mainly by means of figures, the expansion of the University as I have seen it. Of still greater significance is the improvement in its educational activities. If the requirements for admission and graduation to-day be compared with those of twenty-five years or thirty ago it will be recognized that there has been a general and marked elevation of standards. And as a result of this improvement in educational work, coupled with scientific research and productive scholarship on the part of the faculty, Cornell has gained markedly in rank among the great universities of the world.

I now turn from this hurried picture of the development of the University to the component parts of the organization.

THE BOARD OF TRUSTEES

A Board of Trustees is the legal corporation constituting an American university. Theoretically it wields all the powers of the institution. In practice, however, there has grown up another body of co-ordinate standing which shares these powers with the trustees. I mean, of course, the faculty, which in all reputable universities has control of educational affairs. This distribution of functions is now well established at Cornell University.

The function of the board of trustees in a well-ordered university is to manage its business affairs. This includes responsibility for receipts and expenditures of moneys, the investment of funds, care of the buildings and grounds, and the operation and upkeep of the physical plant. On the nomination of the president, the trustees also appoint the members of the instructing staff, and on the recommendation of the president they fix and from time to time vary their salaries. They also vote the annual budget which the finance committee recommends and which the president initially prepares. If the board of trustees undertook to act independently on educational matters or on professorial appointments and promotions they would invade the province of the faculty and of the president and introduce chaos into the entire system. This division of powers and functions, however, obvious as it is, has to be learned and generally by bitter experience, in most new institutions. The troubles and scandals which have from time to time arisen in American colleges and universities have been due generally to a failure to recognize this fundamental principle of uni-

versity government and administration. It has been a matter of gratification and of pride to me that it has been so thoroughly observed at Cornell University for the last quarter of a century. And it has been one of the most potent factors in creating a salubrious and attractive university atmosphere.

But this does not exhaust the duties of a board of trustees. They must also provide means for the growth and improvement and if possible for the expansion of the university. It is not enough that they should invest wisely the funds they find in the university treasury; they must augment those funds. This is a function of the board of trustees which, while always vaguely recognized, has not, generally speaking, been definitely organized in American universities. In the colleges and universities with denominational connections it has been customary for the presidents, who were generally clergymen, to undertake the task of raising money, which they accomplished by appeals to their natural constituencies, namely the members of the religious denominations interested in their respective institutions. In the largest and best American universities, however, which are also undenominational, the task of raising funds is no part of the president's duties (though he may sometimes actively exert himself in the matter), and in recent years the work of raising additional endowments for these institutions has been systematically undertaken by the trustees, generally in conjunction with the alumni. The Cornell Semi-Centennial Endowment Committee is a happy example of such an organization. In some form or other it is likely to remain a permanent organ of the Board. The chairman or other representative of that committee would be in effect the collector-general of university funds.

The establishment and consolidation of this new organ to collect funds for the University would round out and complete the organization of the Board of Trustees. That organization is already in all other respects an admirable one. The membership of the Board of Trustees being large, that body is in effect a board of overseers. It delegates the larger part of its functions to three standing committees: The Finance Committee, the Buildings and Grounds Committee, and the Committee on General Administration. The first of these committees has charge of the investment of funds, the second has charge of the physical plant of the University, and the third is clothed with the powers of an executive committee and between meetings of the Board of Trustees represents it in all matters not specifically assigned

to the other committees. It will be seen, therefore, that this organization provides effectively for the conduct of all University business with the single exception of the raising of funds.

The organization just described was adopted in 1914 on the recommendation of a committee of the Board after careful study of the University business organization and methods. Prior to that date the members of the executive committee consisted only of the Trustees who lived in Ithaca. A leading object of the reorganization was to make possible a larger participation in the business of the institution on the part of the members of the Board who do not live in the immediate vicinity of the seat of the University; and the majority of the members of each of the above-mentioned committees were selected from Trustees living outside of Ithaca. It was in line with this policy that no resident of Ithaca had been elected chairman of the Board since the death of Mr. Sage in 1897. This is a wide departure from that system of local control of the institution which in earlier days Matthew Arnold described as "Mr. Ezra Cornell's University." And with the passing of local control the reason for the disproportionate number of trustees resident in Ithaca has disappeared. It is probable therefore that in the future the large number of trusteeships which in the past were necessarily assigned to Ithaca will either be reduced for the benefit of larger cities in New York and other States in which Cornell graduates are numerous or be filled by representatives of the Faculty who at present sit in the Board as assessors and not as regular trustees.

There may be in cities of this State, between New York and Buffalo, universities which have a future as local institutions. Cornell, however, is not one of them. Its destiny is to remain and to become still more completely a great national institution. In its trustees, professors, and students, therefore, as in its ideals and activities, it should be representative of the nation as a whole.

The following changes have occurred in the Board of Trustees during the year 1919-1920: Horace White was reappointed by Governor Smith and Messrs. Ickelheimer, Schwab, Seaman, and E. L. Williams were re-elected by the Board to succeed themselves, and the alumni elected George J. Tansey to fill the vacancy due to the expiration of the term of Henry J. Patten.

THE FACULTY

While the board of trustees legally constitutes the university, actually it is only an instrumentality to enable the university to achieve its ends. Those ends are the higher education of youth and the enlargement of knowledge. This is the work of teachers and investigators. As I have so often said, therefore, it is the faculty that makes the university. Of the two functions of the professor, if investigation is the rarest, teaching is the most imperative. The art of the teacher, however, is a high one, for it is the stimulation of one mind by another. The master of that art is an invaluable member of any faculty. He deserves the same recognition and reward as the scientific investigator or the literary scholar even though he may not be himself one or the other. For colleges and universities as long as they exist must instruct students and without the good teacher this service cannot be effectively rendered. In a true faculty there is one spirit but diversity of gifts. One professor excels as an investigator; another excels as a teacher; another has a fair record both as a teacher and an investigator. All are valuable; all are needed; all contribute to the life and activity of the institution. Two varieties only must be excluded. There is no place in the faculty for the poor teacher who fails in investigation or the incapable investigator who cannot teach.

There has never been a time when it was so difficult to secure first-class men, and especially young men, to fill university positions. I do not think there is any lack of idealism in the rising generation, but young men of superior parts who are interested in education and might respond to the appeal of science and scholarship are deterred from entering the profession by aversion to the drudgery of teaching mediocre students and by lack of time and opportunity offered for independent scholarship or scientific research. There is also the competition of other professions, and especially, in these days, of business, in which the universities are at a great financial disadvantage.

One obvious remedy is to improve the salaries of university professors and instructors. This indeed I consider indispensable. And along with this economic improvement it is also essential that the social status of the professor be protected. But these attractions alone will not be sufficient to induce the ablest young men of the country to become university professors. For that result there is something vastly more important than money or social recognition. In the first place the work of teaching itself must be made more inspiring. The professor must be permitted to become something more than a drill

master and pedagogue. This ideal might be measurably realized by the exclusion of the considerable body of indifferent and intellectually torpid students who now frequent American universities. Of that I shall have something to say in a later section.

But many of the ablest and most intellectual men in the country would not be attracted to the faculties of our universities by teaching alone. They are primarily interested in creative work. The way to secure such men is to give them opportunities for research and scholarship. They are ready to do a certain amount of teaching but they are unwilling to exhaust their energies in the instruction of students. Many of them feel too that it is more important in the interests of civilization to enlarge the boundaries of existing knowledge than merely to communicate to one generation after another the stock already discovered and extant.

I believe the American public want the best universities in the world and are ready to furnish the means necessary for their support. But the public need to be instructed as to what the university essentially stands for in American life and civilization. It must be demonstrated to them that unless we make and keep our universities genuine laboratories of creative intellectual work they will sink to the level of pedagogical institutes. The most hopeful way to recruit and reinvigorate the faculties of American universities is to make them places for able, well-trained, and intellectually alert professors, generally of course with the primary function of teaching, but also with adequate provision for creative work on the part of all who are ambitious and competent to undertake it.

Considerations like these indicate the vast importance of Mr. Heckscher's splendid gift for the endowment of research at Cornell University. It will do more than any other gift could have done to elevate the University to its highest ideal and to liberate and stimulate the intellectual energies of the professors. Although the enlargement of knowledge is the highest object of a university it always tends, especially in America, in practice to become a mere by-product. Lord Kelvin said to me on the occasion of his visit to Cornell University, in the year 1902, that the American professor was overburdened with teaching and came to the work of research, if he had any time for it at all, with his powers already exhausted. The great service rendered by Mr. Heckscher is to put research in its true place at Cornell. And the income of his Foundation will be large enough to make a good beginning in the realization of that ideal. From what I

know of the Faculty at Cornell University I have no doubt that their contributions to knowledge will amply justify the new endowment. The tree of knowledge is destined to grow at Cornell and as it grows new streams of generosity will water it.

After favorable conditions for his work what the professor most values is liberty of thought, speech, and publication. It is no self-gratulatory assurance but the sober testimony of the sisterhood of American universities, that in this regard Cornell University has been peculiarly attractive to professors. Speaking for a period of nearly thirty years, I know that they have greatly appreciated the unlimited freedom which this University has afforded them, and that for the enjoyment of that freedom they have in very many cases made large pecuniary sacrifices. The University has had no finer and nobler asset, to say nothing of its value as a marketable commodity. It is a glory which I trust may remain a perpetual possession.

In recent years also the professoriate has been admitted to representation on the Board of Trustees. But the Faculty representatives, while enjoying all the privileges of other Trustees, have hitherto not had the right to vote. This discrimination may be corrected either by an amendment of the Charter of the University or by a self-denying ordinance on the part of the Board, agreeing to elect Faculty representatives as Trustees in the annually occurring vacancies which the Board itself fills by co-optation. I think the Faculty will not be permanently contented unless its representatives enjoy all the rights and privileges of other Trustees. If that consummation is not realized in the near future it seems to me probable that the professors, who undoubtedly desire to retain the newly granted privilege of co-operation with the Trustees in the government of the University, may suggest another form in which that policy shall be carried out and perhaps recommend the substitution of an organization of conference committees in which Faculty members and Trustees could come together on absolutely equal terms.

Subject to one qualification only, I think it can be said that scholars and scientists for the last quarter of a century have regarded membership in the Faculty of Cornell University as a very attractive and almost ideal position. The comprehensiveness and variety of range and work of the institution, the excellence of the library, the wealth of laboratory equipment, the stimulating intellectual life and activity, and last, but by no means least, the congenial atmosphere and the universal spirit of freedom of thought and speech and work and life

have conspired to make an environment which intellectual workers have found very delightful. The one serious drawback, the one grave qualification of this picture, has been the inadequacy of the salaries. But the success which has already attended the campaign for additional endowments to raise salaries, and the interest not only of trustees and alumni but also of the general public in the matter, afford grounds for the hope that this discouraging feature may be speedily eliminated. This matter is certainly one of the greatest importance at the present time. While a high salary will not draw or keep the right kind of man in the teaching profession, relief from pecuniary care is necessary to leave his mind free for good teaching and effective research. The right kind of teacher is an idealist, he gives little or no thought to making money; it is all the more important, therefore, that he should enjoy exemption from anxieties regarding a livelihood or the coming of old age, so far at least as that can be effected by the assurance of a reasonable salary and retiring allowance.

The following faculty changes should be recorded for the year 1919-1920: The two Deans of the Engineering Colleges—Dean Smith and Dean Haskell—having presented their resignations to take effect in the course of the year 1920-1921, Professor Kimball was notified that he would be required at that time to enter upon the duties of the office of Dean of the consolidated College of Engineering to which he had already been appointed, and action was taken on details of that appointment that had previously been left unsettled.

On the nomination of the President with the unanimous approval of the University Faculty, Dr. W. A. Hammond was appointed by the Trustees Dean of that Faculty. Under the designation of Secretary he had for many years performed all the duties of the deanship.

The Trustees also reappointed Dr. J. E. Creighton Dean of the Graduate School on the nomination of the President supported by the unanimous vote of that Faculty.

At the beginning of the year, Dr. Walter L. Niles, who since the death of Dr. Polk had been Acting Dean, was, on the nomination of the President with the unanimous concurrence of the Faculty, appointed Dean of the Medical College in New York City. With the passing not only of Dean Polk but also of the Founder and all the first professors the Medical College enters on a new epoch. It is a happy circumstance that Dean Niles, who is now the leader of the institution, in addition to his intrinsic qualifications for the post is both a graduate

of the Medical College in New York and a former undergraduate of the University at Ithaca.

Wallace Notestein, Professor of English History in the University of Minnesota, was appointed Professor of English History, and William Linn Westermann, Professor of Ancient History in the University of Wisconsin, was appointed Professor of Ancient History. Fred H. Rhodes, Ph.D., '14, was appointed Professor of Industrial Chemistry. Orville G. Brim and Theodore H. Eaton were appointed to professorships of Rural Education in the College of Agriculture.

J. T. Parson and S. S. Garrett, Assistant Professors in the College of Engineering, H. L. Jones, Assistant Professor of Greek, and H. P. Weld, Assistant Professor of Psychology, were promoted to full professorships.

In the College of Agriculture the following persons have been promoted from assistant professorships to professorships: J. H. Barron, E. W. Benjamin, J. C. Bradley, Mrs. A. B. Comstock, A. J. Eames, G. C. Embody, A. J. Heinicke, O. B. Kent, L. A. Maynard, E. G. Misner, Miss Helen Monsch, W. I. Myers, Montgomery Robinson, G. P. Scoville, Paul Work, and Mrs. H. B. Young.

THE STUDENTS

Universities have been created and are maintained primarily for the higher education of students. The attendance at Cornell University, which was interrupted by the war, has since steadily increased; the enrollment of regularly matriculated students from September to June 1919-1920 was 5765, being the largest in the history of the University. This is exclusive of the enrollment in the Summer Session, which has now reached about 2000.

There is no intrinsic limit to the number of students which a university may enroll and educate. Practical limitations are, however, set by the size of the faculty and the capacity and equipment of class rooms and laboratories and in some cases also by the sufficiency of residential halls for students. If, however, funds were available to augment the faculty and to enlarge the material equipment and appliances in proportion to the increase of the body of students there would seem to be no reason why with proper organization the process of expansion might not go on indefinitely.

It must be recognized that at the present time the larger American universities are, in proportion to their resources, overcrowded with students. In none of them, however, are there too many students of

the right kind. A university is intended as a resort for those who are interested in the things of the mind and who are curious to know and diligent and keen to learn. Those to whom this intellectual and scholarly life makes little or no appeal may be excellent fellows and well fitted for other activities, but they are not the material of which a university community should be composed. The universities should be reserved for those who are qualified by natural endowment, by previous training, and by diligent and strenuous intellectual effort to profit by the inestimable privileges which they afford. The first step, therefore, in grappling with the problem of the overcrowding of students is to make a more rigorous selection of candidates, to lay stress on an active intellectual life, to insist on strenuous work, and to prescribe searching examinations followed by the elimination of all who fail to reach the required standard.

This is the direction of reform along which we have moved at Cornell University. Our success has been greatest in holding students to their work and in eliminating the idle or incapable. We have been less successful in the selection of students at entrance, neither university examinations nor school certificates furnishing the necessary criteria for discrimination. Men of mediocre ability without fixed habits of study may make a better showing in these tests than able and hardworking candidates who have been deprived through poverty or other causes of suitable means of preparation. It has been found possible, however, to make fairly satisfactory tests in the course of the first year, or even the first term; and even at that time, late though it is, it is a real kindness to undergraduates who are incapable of pursuing successfully the prescribed courses of study to be turned back.

We have found the greatest difficulty in awakening in the general body of the students a real interest in the intellectual life. But there has always been a saving remnant who do catch the contagion of new ideas and principles, and in their interest and enthusiasm the members of the Faculty have had their reward. In their efforts to quicken the intellectual life of the community I have co-operated with the Faculty by giving addresses to students on intellectual themes and also on important public questions which often involve fundamental ideas. And in season and out of season, for more than a quarter of a century, I have striven to impress upon them that their chief duty was to work hard, and that "student activities" were first of all "studious activities," or in other words that the business of the student was to study.

The Cornell University Medical College in New York City decided during the year to limit the number of students it would receive to seventy-five in the first year and sixty in each of the three following years. The reason for this restriction was that the teaching staff had already reached its limit of numbers and the physical accommodation its limit of capacity. Any appreciable increase beyond a total of two hundred and fifty students would involve the addition of new professorships to the Faculty and of new or enlarged laboratories for which no funds were available. The matter was carefully considered by the President and the Faculty and the action taken represents their unanimous conclusion, which was also unanimously approved by the Council and the Trustees. It is proposed in administering the new policy of admission to give the preference to the ablest and best trained applicants. As the Medical School admits only college graduates, adequate data for selection should be available in their undergraduate records and reports from their professors. In order to equalize the benefits of the Medical College to the country generally it was also provided that not more than five candidates should be taken in any one year from any one college or university outside of Cornell University.

The report of the Adviser of Women describes the difficulties which have been experienced in finding suitable housing accommodations in Ithaca for the women students. Recognizing this situation, the Trustees have for the time being limited the number of women students to be received at the University to approximately a thousand, exclusive of women registered in the Graduate School. Although I had no responsibility for this measure, which was adopted while I was absent in Japan, I recognize the expediency of it as a temporary solution of the problem. The only ultimate solution will be found in the provision of additional residential halls for women.

The action of the Medical College in restricting the number of students has naturally raised the question whether other colleges of the University should follow the same course. The answer will depend upon the facts in each particular case. So long as the State continues to make adequate appropriations for the State Colleges of Agriculture and Veterinary Medicine and to meet by increased appropriations the needs of the increasing body of students both as regards teachers and material equipment there is no good reason for setting a limit to the expansion of these colleges. The situation is different with the remaining colleges which are supported from the University

treasury. If these colleges are to expand indefinitely it can only be through a corresponding enlargement of endowment funds. But even at the present time the situation in the different colleges is not the same. The College of Law, which has recently reduced its enrollment by requiring for admission at least two years in the A.B. course, could educate considerably more students than it enrolls at the present time without much if any additional expense either for teachers or equipment. There remain to be considered the College of Arts and Sciences, the College of Engineering, and the College of Architecture. Whether there should be a limitation in the number of students in any one of these colleges will depend on the answer to the other question whether such an increase in the enrollment would involve the addition of a new unit to the teaching staff or to the material equipment or to both, for which funds are not available. If the Board of Trustees is willing to face the reduction of income from tuition fees, I believe the faculties of these colleges would be able and willing not only to stop expansion but to reduce the existing enrollment by weeding out the less capable and less diligent students. The emphasis in this measure of reform would then fall where it belongs, not on the reduction of numbers, but on the improvement of the quality of students.

The enrollment of students for 1919-1920 was, as already indicated, the largest in the history of the University. The figures and the distribution throughout the several colleges are given in the following table:

	Men	Women	Total
Graduate School.....	340	67	407
College of Arts and Sciences.....	1190	622	1812
College of Law.....	166	12	178
Medical College (N. Y. C.).....	271	40	311
Medical College (Ithaca).....	21	17	38
Medical College (Total).....	292	57	349
College of Agriculture.....	915	368	1283
Veterinary College.....	103		103
College of Architecture.....	116	14	130
College of Civil Engineering.....	398	5	403
Mechanical Engineering.....	1203	7	1210
Total.....	4723	1152	5875
Duplicates.....	85	25	110
Net total.....	4638	1127	5765
Summer Session and Summer Terms, 1919 (excluding duplicates).....	1454	1095	2549

BUILDINGS AND GROUNDS

I have already mentioned the expansion of the University grounds from 200 acres to 1456. The first step was taken in 1902. About that time a field of some sixteen acres below West Avenue, which then formed the western limit of the University domain, came into the market to be sold for building lots. I recommended that the entire tract be purchased by the University as a future site for residential halls for men students. But the University had not at that date committed itself to the policy of housing its students, and the Executive Committee referred the recommendation to the full Board without endorsement. At the next meeting of the Board I pointed out, in support of the proposal, that many of the leading universities of the country, from Harvard, Yale, and Columbia, the oldest, to Chicago, one of the newest, had made the mistake of not securing land enough for development and had in the course of time found themselves hemmed in by alien ownership, through which they could not expand without great and in some cases prohibitive expense. The Board, on my motion, then took a short recess to inspect the tract in question and on re-convening voted unanimously to purchase it. This is the field on which Baker Court and Founders Hall now stand—fireproof buildings constructed of local stone, in the Gothic style, as beautiful as they are commodious and well appointed—and it is destined in the not remote future to be covered with other halls which will, I trust, maintain the high standard set by Baker and Founders.

For further expansion we turned to the east and secured two or three farms. The development of the State College of Agriculture later reinforced the reasons I had urged for expansion in this direction and additional farms were purchased. This enlargement of the University domain might be visualized as a fan extending away to the east and beyond the north and south gorges, between which the original grounds of the institution lie like a flat handle.

The next step in expansion came in connection with the location of the hall of residence for women students, the gift of Mrs. Russell Sage. It was proposed, with very general if not indeed universal approval, to locate that building immediately to the north of Sage College. I opposed that location and advocated the purchase of land as a site for the new hall immediately to the north of Fall Creek Gorge. I pointed out that, while the site of Sage College was very suitable for a woman's hall at the time of its erection in 1872, it had been rendered unsuitable for the purpose by the general development of the campus

and especially by the location in the immediate neighborhood of the men's playground, athletic field, and drill hall. I also urged the consideration that in the future the University would need all the land in and about Sage College for buildings devoted to instruction and research. At the meeting of the Board of Trustees in which the question was to be settled I moved that the Board take a recess and examine the merits of the two sites proposed. On re-convening, the Board voted unanimously for the site to the north of Fall Creek Gorge and one of the Trustees, Emerson McMillin, was so impressed with the advantages of the site that he presented the University with the money to purchase it. I then urged, with the support of one or two other Trustees, the purchase of the adjoining tract along the north bank of Fall Creek Gorge up to Forest Home as a site for future halls and grounds for women students, and in a short time this was accomplished, the addition embracing over fifty acres.

Just as the first expansion below West Avenue has provided an ideal site for residential halls for men students, the erection of which began with Baker Court and Founders Hall, so this expansion of the University campus to the north of Fall Creek has provided a beautiful, convenient, and yet secluded site for the location of women's halls, and it is adequate for the indefinite future.

The location of the original buildings of the State College of Agriculture was a difficult problem. The faculty and friends of the college were practically unanimous in the wish that they should be placed on or alongside the original Campus. I pointed out that such a location would afford inadequate space for future expansion and recommended instead the farm field east of Garden Avenue and north of the University playground and common. It was strongly objected, not without feeling indeed, that this site involved banishment from the rest of the University and even discrimination against the College of Agriculture. Fortunately the State Architect, the Hon. G. L. Heins, who had charge of the plans, favored the site, and eventually the Board adopted it. The policy has been abundantly vindicated by the expansion of the College. Not only are its buildings now close to the other University buildings, but it is already obvious that its future growth will call for all the land from the University common and playground to the highway along Fall Creek Gorge.

The gorges between which the University Campus lies are wonderfully beautiful and constitute one of the best assets of the institution. It has been no easy task to preserve them from utilization for material

purposes which would greatly impair if not entirely destroy their beauty. Of course the streams are used for the water and power supply of the University, and by the purchase of land a few miles up Fall Creek provision has been made for an almost indefinite enlargement of that water and power supply in the future. In the construction of the present power plant some of the ablest experts on the Board of Trustees recommended the use of a large pipe in the Gorge, but, in deference to the objections which I and other Trustees urged against that plan on aesthetic grounds, it was finally abandoned and the water was conveyed to the power house through an underground tunnel to the north of the Gorge.

The main lines of development of the Campus are now firmly established. East of Garden Avenue and its prolongation to the road along Fall Creek Gorge the entire area to the north of the playground and common and athletic fields will, as just stated, be required for the buildings of the College of Agriculture which already dot a considerable portion of it. Between Garden Avenue and West Avenue and Fall Creek Gorge and Cascadilla Gorge the entire area will be needed in the course of future generations for class rooms, laboratories, and other structures devoted to purposes of instruction and investigation. The professors' houses on this tract are destined to disappear rapidly; four or five were displaced by the Rockefeller Hall of Physics and still more will be displaced by the new Chemical Laboratory. No new lots either for professors' houses or fraternity lodges within this area have been granted in the last quarter of a century.

Within the campus there are a number of interesting and important problems connected with the buildings and grounds. It has already been decided on my recommendation to locate the new Chemical Laboratory on the tract between Fall Creek Gorge and Rockefeller Hall, in line with this latter building. There is no finer and more commanding site on the campus. That arrangement, however, will prevent the expansion eastward to any appreciable extent of the College of Engineering. It is also limited on the north by the road along Fall Creek Gorge. Unless the quadrangle is divided by an east and west building to the south of Lincoln Hall there is no place for additional buildings for the College of Engineering except to the south and west. Of course the present shops will be demolished to make room for modern well-lighted laboratories like Rand Hall, and the ruins of Morse Hall, on which the fire insurance for the entire group of buildings has already been collected, will in time be removed.

It would be a fortunate circumstance if Franklin Hall, built in 1883, which in its exterior is an eyesore to the campus and in its interior the darkest and most inconvenient building on the campus, could also be removed. I look forward to the time when this area will be covered with modern buildings for the College of Engineering. Let me also add that if Lincoln Hall, built in 1888, which is very poorly adapted to the needs of the division of Civil Engineering and which in the opinion of the Building Committee cannot be advantageously altered or reconstructed, were removed altogether it would have the happy effect of bringing the new and stately Chemical Laboratory into the main quadrangle of the University.

The planning and disposition of the new buildings authorized last winter by the Legislature for the College of Agriculture at a cost of three million dollars will have most important architectural effects for the campus. Fortunately the matter is being carefully studied by the State Architect, the Hon. L. F. Pilcher, whose imagination has grasped this opportunity of combining useful buildings with fine monumental effects. He will of course have the support of the University Committee on Buildings and Grounds and particularly the valuable assistance of its sub-committee, Chairman Edwards and J. C. Westervelt. When this building scheme has been completed I trust that the Agricultural quadrangle may be connected with the main quadrangle of the University not merely by a footpath but by a broad and stately mall.

It is not difficult to foresee that new University buildings will in the future be located on the southern half of both East Avenue and Central Avenue. When the new gymnasium comes it will undoubtedly be located in the neighborhood of the Drill Hall, playground, and athletic field. For further development there would remain the area between Central Avenue and West Avenue which, apart from certain fraternity houses, is now altogether intact.

While the University through the enlargement of its grounds has secured the upper reaches of the gorges in addition to the sections adjoining the Campus, the lower portions still remain in private hands. I trust that either through gift or purchase these also may come into the possession of the University; for the gorges are of incomparable beauty and they would be much better preserved by the University than by a number of different owners with interests limited to their own particular holdings which in most cases they value only for

utilitarian purposes. I venture to express the hope that these gorges will be kept in their wild natural condition.

No other university has so beautiful and romantic a situation as Cornell. We owe it to the alumni and old students who know and love it and to the endless generations of students who will come here in the future to preserve these beauties unimpaired and inviolate. If, however, their refining influence is to be fully felt in the aesthetic education of students these beauties must so far as possible be visible from the Campus. They are, however, becoming rapidly obscured. To some extent this is due to the erection of new buildings. But the principal cause is the growth of trees which were set out, sometimes indeed on a plan, but oftener than not at random and by chance. Every lover of nature mourns the destruction of trees, but even at the risk of the charge of denudation the cutting down of trees and the opening up of vistas in numerous places is an absolutely imperative necessity if the members of this university community while going to and fro on the Campus are not to be shut out from the wondrous beauty by which they are encompassed and which in previous years it was our good fortune to enjoy.

FINANCES

With a view to furnishing material for the Semi-Centennial Endowment campaign The President's Report for 1918-1919 was devoted almost exclusively to University finances, including an exhibit of the endowment and other properties of the institution, the present income, and the needs, not only for expansion, but especially for strengthening the existing foundations and above all for adequate endowments for professorships and instructorships. It is unnecessary to repeat those figures in the present report.

The official representative of the business and financial side of the University has been for many years Emmons L. Williams, who retired a year ago, when he was immediately elected a Trustee and also a member of the Finance Committee. A man of great practical sagacity and business ability and an expert in investment, Mr. Williams had grown up with the University, knew thoroughly its history and affairs, and carried successfully a burden of work and responsibility which the succeeding years had augmented to the very limit of his capacity, not without some impairment, I fear, of his health and vitality. He is a fine example of disinterested, devoted, and efficient service on the part of a first-class business man to an

institution of higher education. Men of less ability and experience in affairs engaged in the activities of business and commerce received many times over the salary he drew from Cornell University. And I have no doubt that he could have doubled or still further multiplied his compensation by following their example. But he set before money-making altruistic service to a noble cause. And that service was admirably performed. Cornell University cannot be too grateful to him. In wishing him further years of happy and fruitful service I desire to record my thanks for the loyal co-operation he always gave me and my satisfaction that the relations between us were always not merely good but in the highest degree friendly and cordial.

Fortunately a worthy successor to Comptroller Williams has been found in Charles D. Bostwick, '92, who had long been his assistant and who for several years was Treasurer.

Comptroller Bostwick's first report will be found elsewhere in this volume. I refer to it for all details regarding the finances of the University. It will be noted that the deficit which had been carried for some years past was completely wiped out in 1919-1920. Among the gifts, I have already mentioned the subscription of over five millions to the Semi-Centennial Endowment Fund by the alumni and friends of the University, of which something over a million dollars has already been paid in to the University treasury, and on page 12 the gift of half a million by August Heckscher for the endowment of the Heckscher Foundation for Research. The University is in need of an additional endowment of at least five million dollars for general purposes and could wisely and advantageously use twice that amount in promoting the great work to which it is dedicated. I know of no enterprise in America more deserving of generous support or more certain to bring the best and highest returns to men and women who desire to use their wealth for the noblest interests of the nation and of mankind.

STATE RELATIONS

The relations of Cornell University to the State of New York have in the course of time reached a satisfactory adjustment. Founded as the federal land-grant college of the State of New York, the institution for the first quarter of a century received no support of any kind from the State. Its resources consisted only of the proceeds of the sale of the federal land grant, the \$500,000 endowment and some smaller donations given by Ezra Cornell, and two or three buildings and one professorship given by others. In most of the other States of the Union

between New York and the Pacific the universities which received the federal land grant were also supported by State appropriations. But in the New England and Middle States privately endowed colleges and universities were already firmly established. For Cornell University the situation was altogether anomalous. The federal land grant, which presupposed supplementary State appropriations, imposed upon the institutions which it founded the obligation to maintain instruction at least in agriculture and the mechanic arts, for which, however, the federal funds were wholly inadequate. The generosity of Hiram Sibley provided a building and one endowed professorship of mechanic arts at Cornell, but no other professorships were available for general purposes and no private gifts were forthcoming for agriculture and veterinary medicine and the allied subjects, nor were any likely to be forthcoming in the future.

In my Inaugural Address in 1892 I presented these facts to the public as the ground of an appeal to the State for aid to Cornell University. But if the State, on account of the previous existence of privately endowed colleges and universities, declined to make appropriations to the University for general purposes, there were, I pointed out, at least two objects for which a special appeal might be made in virtue of their vital importance to the health and material prosperity of the commonwealth, and which the existing institutions did not include within their programme of operations. These were agriculture and veterinary medicine and the allied subjects. And for these at least I argued that the State should make appropriations to Cornell University. The western States were making a good beginning and I was desirous that New York should not be left behind. Yet apart from State appropriations there was no other possible way of bringing science to the assistance of the owners of the farms and dairies and of the flocks and herds of the State. My appeal was in the following terms:

"From the very beginning Cornell University has paid special attention to the two subjects, which, more than any other, vitally affect the interests of the majority of our people—I mean agricultural and veterinary science. What the university has achieved in these fields is known not only to educators but to the farmers of our State. But it is the merest fraction of what with adequate resources might be done. We need an appropriation for a college of veterinary science, of at least \$40,000 a year. This is demanded alike in the interests of health and wealth. In the State of New York, for a period of eight years ending with 1887, every eighth death was from tuberculosis; and the infection in most cases comes from the lower animals. Three per cent of our cattle are tuberculous. Comparative pathology will probably be the next fruitful field for medicine. It is a field for which Cornell University has unusual facilities and to which it is especially summoned by the legal mandate to give liberal and practical education. Nothing

is needed for success but a fair appropriation from the treasury of the State. And at the same time liberal provision should be made for agriculture including horticulture. The first and imperative need is that of a building large enough to house along with the department of agriculture, those of horticulture, entomology, and dairy husbandry. It should contain a museum for the exhibition of all kinds of agricultural implements. The home of teachers and investigators, it should be made the living centre of all the agricultural interests of the State. Students would come for the regular courses, or for short winter courses; and those who could not leave their homes might receive instruction by correspondence. Bulletins would be published giving the result of investigations. All this and more, if we had aid from the State, could be done for the benefit of our farmers, as we already do a good deal even without that aid. We should need at least \$200,000 for the building, and then such appropriations as would make the work in it worthy of the vast agricultural resources and wealth of this imperial State."

This programme naturally had the support of the able and devoted heads of the two departments concerned, Isaac P. Roberts, Professor of Agriculture, and James Law, Professor of Veterinary Science. In carrying out the programme it was deemed advisable, in view of conditions in the State, to begin with veterinary medicine. Thanks to the indefatigable efforts of the Hon. E. C. Stewart, state senator from this district, and to the co-operation of many others and especially T. S. Williams, of the class of '84, a bill was adopted by the Legislature and approved by the Governor in 1894 providing for the establishment of a State College of Veterinary Medicine at Cornell University and making an appropriation of \$150,000 for the buildings. In 1897 a law was passed providing for the organization and administration of the college and making an additional appropriation of \$25,000 for its support. This latter bill was the real turning point in the relations of the State to the University, for it committed the State to the policy of maintaining a State college at Cornell.

A few years later we proceeded to carry out the other part of the programme laid down in my Inaugural Address, that relating to agriculture and allied subjects. The precedent had already been established of having a State college at Cornell University, and of making State appropriations not only for the buildings of that college but for its support and maintenance. I had also, in selecting a successor to Director Roberts, who had retired, deliberately sought to find a man who, possessing the other qualifications for the office, should also have the capacity to serve as leader in carrying out this carefully matured plan for the establishment and maintenance of a State College of Agriculture at Cornell University. My choice was Professor L. H. Bailey and the nomination was unanimously confirmed by the Board of Trustees. Dean Bailey rose splendidly to the work and to the opportunity. Under his inspiring leadership the general public, and

especially the farmers of the State, rallied to the cause of agricultural education and demanded the establishment of a State College of Agriculture at Cornell University. This was effected in 1904, when the State also made an appropriation of \$250,000 for buildings and equipment and \$40,000 for maintenance. There has been a vast expansion since that date to 1920, when the State appropriated over \$1,000,000 for the annual maintenance and operation of the college and authorized an expenditure of \$3,000,000 for additional buildings, of which \$500,000 is available this year. The following table shows the appropriations made by the State to the College of Agriculture during the entire period:

Fiscal Year	Maintenance and Operation	Building and Equipment	Extension	Total
1904	\$40,000.00	\$250,000.00	.....	\$290,000.00
1905	40,000.00	.....	\$10,000.00	50,000.00
1906	100,000.00	.....	.....	100,000.00
1907	150,000.00	75,000.00	.....	225,000.00
1908	150,000.00	30,000.00	10,000.00	190,000.00
1909	175,000.00	.....	10,000.00	185,000.00
1910	200,000.00	200,000.00	12,000.00	412,000.00
1911	260,000.00	50,000.00	33,000.00	363,000.00
1912	311,000.00	427,000.00	50,000.00	788,000.00
1913	505,000.00	334,000.00	70,000.00	909,000.00
1914	449,996.00	7,500.00	57,200.00	514,696.00
1915	546,325.00	35,000.00	45,428.00	626,753.00
1916	547,119.34	.....	44,990.66	592,110.00
1917	717,649.00	34,000.00	76,502.00	828,151.00
1918	816,330.80	9,500.00	130,351.00	956,181.80
1919	846,893.80	18,400.00	139,325.00	1,004,618.80
1920	1,079,623.80	519,700.00	201,265.00	1,800,588.80
17 yrs. Total	\$6,934,937.74	\$1,990,100.00	\$910,061.66	\$9,835,099.40

I venture to think that no appropriations made by the State of New York have been productive of such large returns on the original investment as these appropriations for the State Colleges of Agriculture and Veterinary Medicine at Cornell University. From the point of view of the University, these appropriations have been of invaluable assistance as they have enabled the institution to expand and perfect an educational work to which it was committed by its charter, for which no other funds were available, and for which, owing to the magnitude of the expense, only public funds would have been at all adequate.

Apart from the exceptional case of the Drill Hall, only the Colleges of Agriculture and Veterinary Medicine at Cornell University receive or have received appropriations from the State of New York. The University, excluding these two colleges, must live on the income of its endowment or the fees it collects from students. That is why it appeals to private benevolence on behalf of the liberal arts, pure sciences, technology and engineering, architecture and the fine arts, law, medicine, and other professional courses,—in a word for every branch of knowledge that is or ought to be represented on this campus excepting only agriculture and veterinary medicine.

PUBLIC SERVICE

The relations of the University to the State of New York impose special obligations upon the College of Agriculture. These embrace, of course, teaching and research at the college, and extension and demonstration work among the farmers in every county of the State. There are also other modes of helpfulness to the community and without attempting to enumerate or define them I will merely say that "service to the State" might well be the motto under which the College of Agriculture should live and operate. And I am happy to record that this spirit of service has actuated the institution.

But the entire University owes service to the State and to the nation. This was strikingly demonstrated during the years of the war; and the public were surprised at the great number of experts who went from the universities to render indispensable scientific and technical service to the army and navy. Even the plan of the training camps was to no inconsiderable extent anticipated by the military departments of the land-grant colleges and universities. And they received for the first time from the public the recognition to which they had long been entitled. At Cornell University no department has during the last quarter of a century had a greater expansion and a more vigorous and healthful development than the military department. I have always been deeply interested in it, alike for the service it rendered the individual student, the University, and the Republic. And year after year I have striven in every way at my disposal to foster its growth and support the officers in charge of it. That Cornell University, on account of the standing of its military department, has held for so many years continuously the proud position of "distinguished institution" in the small select list which the War Department maintains for the entire country, has been to me a source

of the keenest gratification. The renewal of this annual rating in June 1920 gives me a special parting pleasure.

In war time many students necessarily left the universities. But the institutions were kept agoing as "indispensable industries." Even in war time their chief function was to train the minds of students and pursue scientific and scholarly research. Still more is it true that in times of peace the best public service that professors and students can render is the devoted and successful performance of that function. It is sometimes assumed that when a professor receives an appointment to a federal or State office he for the first time has an opportunity to render public service. There could be no greater mistake. The professor renders as teacher and investigator one of the highest and most valuable of public services. And it is only in very exceptional cases that he is justified in asking for leave of absence to undertake a political office. In the Middle Ages this was clearly understood. Thinkers then recognized three great institutions in the civilized world: the state, the church, and the university; and each had its own field of operation and contributed its distinctive quota to the service of the community. As a rule little is gained, and a good deal is apt to be lost, by intermingling the functions of these institutions.

In a democracy the nature and functions of the university cannot be too often explained or too clearly defined. It is the highest organ of the intellectual life of the people. Without the university or without the scholars, investigators, and thinkers whom the modern university brings together, the civilized world would revert to barbarism.

RESIGNATION OF THE PRESIDENT

I have felt it a high honor and privilege, and a rare opportunity for public service, to be the chief executive of Cornell University for the past twenty-eight years. Two very distinguished presidents of American universities in service up to the twentieth century held office till they were respectively seventy-five and eighty years of age. I have been urged by members of the Board of Trustees and of the Faculty and Alumni to follow their example and remain in office ten or fifteen years longer. But apart from age (and of course infirmity) I have long entertained the conviction that there is another reason for resigning office on the part of the head of a university or the head of a business corporation or of a government. That reason is long tenure of office. In this conviction I have remained firm and unalterable. A man who has been a chief executive makes his posi-

tive contribution to the institution, gets his creative ideas embodied in its life and activities and organization, communicates his spirit to his colleagues and fellow-workers (in so far as these things are possible and desirable) in a period of time which in some cases need not exceed ten or fifteen, and in few cases ought to exceed twenty or twenty-five years. The fact that I had held office for the long term of twenty-eight years was in my opinion an unanswerable reason why I should resign. Any institution is entitled to a new head once in a quarter of a century. And (it may be added) a man who has served in office that length of time has surely earned the privilege of a change of work.

Accordingly I handed my letter of resignation to the Trustees in February, 1920, to take effect at the June Commencement. At this latter date the senior Dean, A. W. Smith, was elected Acting President. He had already on my nomination served in the same office during the months of April and May while I was absent in Japan,—a kind and helpful co-operation of which I am deeply sensible and genuinely appreciative.

My letter of resignation and the resolutions thereupon adopted by the Board of Trustees and the University Faculty are printed on the pages immediately following as a postscript to this report.

To the Board and to the Faculty, to the individual trustees and members of the instructing body and the administrative staff I desire, in taking official leave, to express once more my heartfelt thanks for the confidence, co-operation, and support they have extended to me and my sincere appreciation of their devoted service to the University we have all loved and will (I am confident) all continue to work for. That Cornell may increasingly prosper and abound in the fruits of the mind is my most earnest hope and prayer.

JACOB GOULD SCHURMAN

POSTSCRIPT

I

PRESIDENT SCHURMAN'S LETTER OF RESIGNATION

ITHACA, N. Y., February 12, 1920.

To the Board of Trustees of Cornell University:

GENTLEMEN: I have long been of the opinion that it is beneficial and salutary to great institutions, whether of government or business or education, that there should be reasonably frequent changes in the office of chief executive. The variety of situations makes it impossible to fix any particular term that might be generally applicable, but it will perhaps be recognized that there are few cases in which the period can be advantageously extended beyond 25 or 30 years.

In conformity with this view I have for some time past had it in mind to resign the Presidency of Cornell University, which I have now held for nearly 28 years. The War compelled me to postpone the earlier execution of this purpose, for I felt in that great crisis that everyone denied the privilege of bearing arms but engaged in a necessary undertaking—and the universities were as indispensable as munition factories—was under solemn obligation to remain at his post and render the best service he could to the Republic. Now, however, that peace has been established and must soon be proclaimed I am free, especially as the University's war-problems have all been happily disposed of, to carry out the resolution I had previously formed.

I may mention also the personal consideration that release from the University will set me free for other duties I much desire to attend to.

Accordingly I herewith resign the office of President of Cornell University and request that this resignation take effect at the next Commencement, June 23rd, 1920.

In terminating this official relation which has extended over so many years I should do great injustice to my own feelings if I failed to acknowledge with sincere gratitude the friendly co-operation and support which I have always received in such abundant measure from trustees, teachers, alumni, and students, as well as from the staff of administration, or to assure them of the regard and affection which I cherish for them and of my best wishes for their welfare and happiness. And to the great University we have all loved and served, out of office as in office, I join them in undying devotion and also in the fervent hope that it may always be a centre of the freest and most intense intellectual activity and a worthy organ of the highest education.

Very faithfully yours,

JACOB GOULD SCHURMAN.

II

RESOLUTION OF THE BOARD OF TRUSTEES

February 28, 1920.

The Trustees of Cornell University in accepting the resignation of President Jacob Gould Schurman, to take effect as requested by him at Commencement, June 23, 1920, are keenly sensible of the loss which this means to the University. They fully realize the large part he has had, throughout the period of nearly twenty-eight years of his service as President, in the extraordinary development and expansion of the University.

The mere increase in the size of the University testifies to the significance of that development. That the number of its professors should increase from a few score in 1892 to a present faculty of as many hundred and the number of undergraduates from about fourteen hundred to between five and six thousand, is in itself, indicative of the forceful and creative character of the executive head of the institution. In 1892 the University had three colleges, none of them a State organization. It now has eight, including two State colleges.

But far more than the growth in numbers or size have been the strengthening of the kind of education afforded by the University to its students and the making of Cornell the centre of influences of culture and scientific knowledge, of constantly increasing usefulness to the state and nation. These are some of the fruits of President Schurman's labors. The marks of his upbuilding work as a scholar, as an educator, and as an administrator will be enduring.

President Schurman has represented the finest type of educational leadership, marked by a clear perception of the problems of higher education, by a keen and far-sighted judgment concerning the solution of them and by a tolerant and hospitable mind toward the opinions of those engaged with him in this field, that have secured their harmonious help and co-operation. He gave up the teaching of philosophy to become an administrator. Much of the educational work in the various colleges of the University is of a character far removed from the field of his earlier training. Yet he has uniformly exhibited such a comprehensive grasp of the educational methods and such a sympathetic understanding of the new problems of these various schools and departments as to afford to their deans and directors the aid and furtherance most needed and sought.

Doctor Schurman lays down the presidency of this University when he is at the height of his great powers and when the success of his long labors is most convincingly established. He has brought the different elements making up the organization of the University to a gratifying state of common understanding and fellow feeling. One of the finest tributes we can pay to him is the recognition of the fact that to-day there probably is no University in the land where the executive head, the governing body, the faculty, the undergraduates and the alumni are working together with greater harmony or more cohesive union of purpose for the good of the institution than at Cornell.

The members of this Board of course know President Schurman best in his relations to their legislative duties. Two or three of our number have been trustees throughout the full period of his presidency and several more for the greater part of that time. We have great satisfaction in the thought that whatever honest differences of opinion may have arisen at one time or another, there has never been friction or dissension between the President and the Trustees, and upon every question of vital importance there has been in the end practical unanimity of judgment as to the wisdom of the action taken. The loyal co-operation of the President and of the Trustees which has always marked our relations has made our association together in this Board a service of constant pleasure and helpfulness. And now, on the occasion of his presentation of his resignation, we wish to repeat the assurances which we extended to him on his sixty-fourth birthday nearly two years ago of our affection and esteem, of our appreciation of his loyalty and devotion and of our sense of gratitude for his unfailing consideration and helpfulness. We thank him for what he has said to us of his continued interest in

Cornell University. We bid him God speed and we wish him many years of happiness and of usefulness to the cause of higher education and the public welfare.

III

PROCEEDINGS OF THE UNIVERSITY FACULTY

The University Faculty, at a meeting held on March 10, 1920, having been informed by President Schurman of his resignation, created a committee to frame resolutions on the President's retirement from the University and to make such arrangements on behalf of the Faculty in connection with his retirement as might be found desirable. The Faculty requested the chair to appoint the committee (the presiding officer at that time, Professor J. H. Comstock, to be chairman). He appointed the following committee: Professors G. L. Burr, J. E. Creighton, W. A. Hammond, D. S. Kimball, V. A. Moore, E. H. Woodruff, and J. H. Comstock. The committee framed the following address, which was engrossed, signed by the members of the Faculty, bound, and presented, on behalf of the Faculty, to President Schurman:

Dear President Schurman:

With the close of this academic year you retire from the presidency of Cornell. For more than a quarter-century you have been our leader. Deep is this Faculty's debt to you. From the first, though loyal to the traditions of the University and to the aims of your predecessors, you have been above all the spokesman of the scholar and the teacher. You have championed our material interests, zealous to free us from sordid cares by adequate salary and by old-age pension, thoughtful to aid us in every embarrassing emergency. You have welcomed in us the scholar's aspirations, equipped us, so far as the University's means have permitted, with the scholar's tools, encouraged in us the scholar's fruitfulness. Yet keen, too, have you been in honoring those who through necessity or choice have in the teacher's work alone proved their devotion. You have been the advocate of graduate study, the teacher's best companionship and stimulus; and every effort for the advancement of the intellectual life among us or our students has found in you its source or its support. Our freedom of teaching and all our liberties of voice or pen have had in you a sturdy champion. Ever respectful of those liberties yourself, you have presided over our deliberations with a fairness that has known no animosities, resented no opposition. With your instant comprehension, your judicial temper, and your masterly power of statement you have sifted the evidence and weighed the opposing arguments, illuminating and reconciling, till often agreement has replaced debate. In your administration of our affairs you have constantly invited our advice and welcomed our co-operation; and for the better safeguard of our liberties you have opened ever new channels for our influence with the University authorities and with the public at large. You have lost no oppor-

tunity to dignify by precept and by example the career of the teacher or to stir us to loftier ideals of our duty to learning, to truth, to our country and our fellow men. We cannot let you leave us without this assurance of our lasting gratitude and most heart-felt esteem.

REPORT OF THE COMPTROLLER OF CORNELL UNIVERSITY

To the Board of Trustees:

I have the honor to submit herewith a financial statement of Cornell University covering the fiscal year from July 1, 1919, to June 30, 1920, inclusive.

INCOME AND EXPENSE

From a financial standpoint the results of the year are unusually favorable. By reason of the fact that the registration of students was greater than the number estimated at the time the budget for the year was adopted, it was possible to make provision for certain unexpected expenses, to meet the accumulated deficit in current income which at the beginning of the year amounted to \$40,000, and to carry forward a balance in the current income account of \$24,437.90.

The total income for the year 1919-1920 applicable to current expenses and exclusive of the State Colleges was. \$2,650,541.19

and the total expenses \$2,531,868.37

leaving an excess of income of \$118,672.82

From this latter sum should be deducted the amount transferred to the fund representing income due special funds

24,697.31

and the amount of increase in re-appropriations to meet obligations already incurred

29,537.61

54,234.92

This represents an actual surplus for the year of
which, as stated above, cancels the accumulated income deficit July 1, 1919, of

64,437.90

40,000.00

leaving a surplus in current income account of

\$24,437.90

STATE COLLEGES

The income of the New York State Veterinary College amounted to \$119,469.67 and the expenses to \$117,769.36.

The State College of Agriculture, excluding funds from the United States Government which are included in the University statement of income, received during the year from appropriations from the State, and from student fees and sales of products \$1,261,912.44. The expenses of the college aggregated \$1,209,829.62. A portion of the excess of income over expense in the agricultural college is due to the receipt at the beginning of the year of money from the State to reimburse the University for expenses incurred, vouchers for which were in transit at the beginning of the year.

CONDENSED AND COMBINED INCOME STATEMENT
(See Schedule II of Treasurer's Report)

	University at Ithaca	University at New York	State Veterinary College	State Agricultural College	Total
Tuition	\$586,304.33	\$40,903.67	\$1,735.00	\$49,798.85	\$678,741.85
Summer Session and Fourth Term, 1919	59,311.26			3,435.74	62,747.00
Laboratory and other fees	202,572.30	9,647.90	2,206.58	19,148.90	233,575.68
From invested funds	\$848,187.89	\$50,551.57	\$3,941.58	\$72,383.49	\$ 975,064.53
College Land Scrip Fund	533,245.13	176,618.98			709,864.11
Residential Halls	34,428.80				34,428.80
Dining Rooms	129,163.38				129,163.38
From United States	311,245.98				311,245.98
From State of New York	307,997.79	7,440.00			315,437.79
From gifts for current expenses	15,605.19		90,884.65	975,950.46	1,082,440.30
Rents of Buildings	51,007.68	50,950.00			101,957.68
Departments for sales and services	5,866.37				5,866.37
Industrial Fellowships	44,305.20	26,291.61	24,643.44	205,299.93	300,540.18
Miscellaneous	15,673.00				15,673.00
	32,237.98	9,724.64		8,278.56	50,241.18
	<u>\$2,328,964.39</u>	<u>\$321,576.80</u>	<u>\$119,469.67</u>	<u>\$1,261,912.44</u>	<u>\$4,031,923.30</u>

CONDENSED AND COMBINED EXPENSE STATEMENT
(See Schedule III of Treasurer's Report)

Salaries for Instruction and Research	\$733,518.88	\$147,933.31	\$47,334.35	\$502,895.68	\$1,431,682.22
Departments	182,369.00	66,361.14	23,162.72	379,099.21	650,992.07
Administrative Salaries	72,181.75	9,470.00	7,920.00	126,175.17	215,746.92
General Expense	53,402.91	4,852.28	3,583.06	63,945.30	125,783.55
Operation and Maintenance of Plant	89,978.24	78,606.70	16,731.35	102,639.79	287,956.08
Prizes, Scholarships, Fellowships, and Loans	55,475.42	1,400.00			56,875.42
Residential Halls	105,885.58				105,885.58
Dining Rooms	311,245.98				311,245.98
Summer Session 1919	37,104.67			11,680.37	48,785.04
Federal Experiment Station and Extension Work	213,150.58				213,150.58
Library	51,845.77			3,332.63	55,178.40

Infirmary	\$ 89,302.54				\$ 89,302.54
Drill Hall Construction and Maintenance.....	17,332.10				17,332.10
New Construction and Alterations.....	36,426.94		\$ 68.34	\$ 2,699.82	39,195.10
Special Equipment			67.10		67.10
Repairs	29,651.19			6,116.11	35,767.30
Industrial Fellowships	9,495.78				9,495.78
Special investigation and experiment.....			14,800.42	8,428.06	23,228.48
Miscellaneous	101,441.30	\$ 2,398.47	4,102.02	2,817.48	110,759.27
Income transferred to Principal	24,857.84				24,857.84
Income transferred to Medical College.....	6,180.00				6,180.00
	<u>\$2,220,846.47</u>	<u>\$311,021.90</u>	<u>\$117,769.36</u>	<u>\$1,209,829.62</u>	<u>\$3,859,467.35</u>

PROPERTY ACCOUNT

	July 1, 1919	July 1, 1920	Increase
Productive Funds:			
University at Ithaca.....	\$9,978,370.04	\$10,997,955.31	\$1,019,585.27
Medical College, New York.....	4,998,176.79	5,003,176.79	5,000.00
Residential Halls.....	1,096,789.26	1,096,789.26	
	<u>\$16,073,336.09</u>	<u>\$17,097,921.36</u>	<u>\$1,024,585.27</u>
Income due Special Funds	251,379.86	276,077.17	24,697.31
Premium and Discount (University)	130,371.38	157,654.01	27,282.63
Premium and Discount (Medical)	31,198.43	34,317.01	3,118.58
	<u>\$16,486,285.76</u>	<u>\$17,565,969.55</u>	<u>\$1,079,683.79</u>
Current Income balance.....	215,491.61	309,467.12	93,975.51
	<u>\$16,701,777.37</u>	<u>\$17,875,436.67</u>	<u>\$1,173,659.30</u>
Real Estate, educational, etc.....	4,022,616.81	4,055,733.26	33,116.45
Equipment.....	2,333,420.37	2,485,873.04	152,452.67
	<u>\$23,057,814.55</u>	<u>\$24,417,042.97</u>	<u>\$1,359,228.42</u>
State Game Farm	11,150.00	12,404.06	1,254.06
State Drill Hall	341,670.70	349,271.08	7,600.38
State College Buildings	1,545,294.57	1,546,590.83	1,296.26
State College Equipment.....	502,458.38	535,044.88	32,586.50
	<u>\$25,458,388.20</u>	<u>\$26,860,353.82</u>	<u>\$1,401,965.62</u>

The Productive Funds increased during the year as follows:

Alumni Endowment Fund.....	\$ 500.00	
Class of '89 Endowment.....	272.00	
Class of '19 Fund.....	695.82	
Comstock Memorial Fund.....	84.00	
Eidlitz, Marc, Instructorship in Civil Engineering..	40,000.00	
Grimes, Arthur M., Memorial Fund.....	5,000.00	
Guiteau Loans repaid and interest.....	11,496.66	
Ingersoll, Clayton C., Memorial Fund.....	1,000.00	
Kuichling Library Book Fund.....	200.00	
Miller, Jane, Prize Fund.....	1,000.00	
Parkin Grenville W., Memorial Fund.....	1,000.00	
Russel, Wm. M., Memorial Fund.....	5,000.00	
Sampson, Frances, Fine Arts Prize Fund.....	400.00	
Semi-Centennial Salary Endowment Fund.....	908,811.20	
Treman, R. H., Fund.....	21,500.00	
Wentz, J. L., Scholarship Fund.....	5,500.00	
Transfer from Income to Principal of Funds.....	19,613.59	
		<u>\$1,022,073.27</u>
Reduced by:		
Cottage Renewal Fund.....		<u>2,488.00</u>
		<u>\$1,019,585.27</u>
Medical College Endowment:		
J. M. Polk Scholarship Fund.....		<u>5,000.00</u>
		<u>\$1,024,585.27</u>

Premium and Discount increased by excess of discounts over premiums paid on securities purchased during the year as follows:

University at Ithaca.....	\$27,282.63	
Medical College at New York.....	3,118.58	\$30,401.21
		<u>\$30,401.21</u>
To the Real Estate Account there was added:		
Agricultural Farms paid on account.....	\$1,721.43	
Military Artillery Garage.....	7,915.20	
Military Artillery Barn.....	8,524.96	
332 Wait Ave. Land.....	5,000.00	
Mead Farm.....	9,954.86	\$33,116.45
		<u>\$33,116.45</u>

The average rate of interest received during the year of 1919-1920 was 5.411.

THE PRODUCTIVE FUNDS OF THE UNIVERSITY WITH THE PURPOSE FOR WHICH EACH FUND IS INTENDED
AND THE INCOME RECEIVED DURING THE YEAR ARE AS FOLLOWS

	July 1, 1919	Additions during Year	July 1, 1920	Income
Alumni Endowment Fund:				
Gift of Alumni to the Endowment Fund of the University. Established 1908	\$550.00	\$500.00	\$1,050.00	\$56.81
Alumni Fund:				
The permanent gift of the Alumni of the University through the Cornellian Council, and by the action of the Board of Trustees added to the permanent endowment of the University, the net income to be used for University purposes. Established 1913	22,922.00		22,922.00	1,240.31
Baker, Charles H., Prize Fund:				
Gift of Charles H. Baker, 1886, to found a public speaking prize for the benefit of the Junior and Senior students in the College of C.E., but available likewise to those in Mechanic Arts, Architecture, and similar avocational courses. Established 1912	3,000.00		3,000.00	385.73
Barnes Library Endowment Fund:				
Gift of Mrs. Harriet Barnes Newberry and A. Victor Barnes in memory of their father, the late Alfred Cutler Barnes. Established 1904	5,000.00		5,000.00	270.55
Barnes, Mrs. A. S., Shakespeare Prize Fund:				
Gift of Mrs. A. S. Barnes, the income to be appropriated as a prize to the undergraduate student who shall present the best essay upon the writings of Shakespeare. Established 1887	1,000.00		1,000.00	54.11
Bennett, James Gordon, Prize Fund:				
Gift to endow the prize established in 1912 by Mr. Bennett for work done in local and generalized anaesthesia, especially in small animals. Established 1916	1,050.00		1,050.00	56.81
Bennett, Philo S., Prize Fund:				
Gift from the estate of Mr. Bennett, the income to be used as a prize for the best essay discussing the principles of Free Government. Established 1905	400.00		400.00	21.65
Botsford, W. Hull, Memorial Fund:				
Gift of friends in class of W. H. Botsford to the College of Architecture, to be administered by the Faculty of that College. The income to be used for the purchase of books for the Architectural Library. Established 1915	255.00		255.00	13.80

	July 1, 1919	Additions during Year	July 1, 1920	Income
Caldwell, George Chapman, Prize Fund: Gift of Mrs. Grace Caldwell Chamberlain and Prof. Frank Caldwell to establish in memory of their father a prize of \$50 a year, to be annually awarded in money and accompanied by a certificate on parchment, to a member of the Senior class in the Chemical course for general excellence in chemical work. The award to be made by the staff of the Chemical Department. Established 1913.....	\$1,100.00		\$1,100.00	\$ 59.52
Church, Irving P., Book Fund: Gift of former students in College of Civil Engineering, the income to be devoted to the purchase of additions to the Library of the College of Civil Engineering. Established 1917.....	2,500.00		2,500.00	135.28
Class '86 Memorial Prize Fund: Gift of Class of 1886, the income to be awarded annually as a prize in Junior Oratory.....	1,886.00		1,886.00	102.05
Class '89 Endowment Fund: A University endowment fund being raised by the class of 1889. Estab- lished at its 25th reunion in 1914.....	3,902.00	\$272.00	4,174.00	212.50
Class '91 Memorial Fund: Gift of Class of 1891, the income to be added to the principal until class action. Established 1891.....	950.49	51.43	1,001.92	51.43
Class '94 Memorial Debate Prize Fund: Gift of Class of 1894, as the foundation of a prize in debate.....	1,894.00		1,894.00	102.49
Class '96 Memorial Fund: Gift of Class of 1896 as the nucleus for a fund which shall be used for the establishment of a University Club.....	1,429.76	77.37	1,507.13	77.37
Class '98 Alumni Hall Fund: Gift of Class of 1898 to be added to the fund for the establishment of a University Club.....	619.79	33.54	653.33	33.54
Class 1905 Endowment Fund: Established by the Class of 1905, "this money in total or in interest, as the council may see fit, to be applied to supplementing professors' salaries, at the discretion of the proper University authorities." Established 1915.....	7,703.00		7,703.00	416.81
Class 1908 Fund: Established by Class of 1908, to be invested with University funds, the income on \$500 less 5% transferred to University Insurance Reserve Fund to be paid over to Class Secretary. The fund when no longer needed by the Class to revert to the University for general University purposes unless the Class at some regular meeting designates a particular University purpose for its use. Established 1908.....	2,163.17	117.05	2,280.22	117.05

Class 1912 Fund:			
Established by Class of 1912, to be invested by the University with its funds, the income less 5% transferred to University Insurance Reserve Fund to be subject to call of Life Secretary of Class. The Fund when no longer needed by the Class to revert to the University for general University purposes unless the Class at some five-year reunion meeting designates a particular University purpose for its use. Established 1912			
	\$ 813.38	\$ 813.38	\$ 44.01
Class 1913 Fund:			
Established by Class of 1913 on same basis as the 1912 fund			
	1,450.00	1,450.00	78.46
Class 1914 Fund:			
Established by Class of 1914 on same basis as the 1912 fund			
	800.00	800.00	43.29
Class 1915 Fund:			
Established by Class of 1915 on same basis as the 1912 fund			
	1,618.91	1,618.91	87.60
Class 1916 Fund:			
Established by Class of 1916 on same basis as the 1912 fund			
	2,850.00	2,850.00	154.21
Class 1917 Fund:			
Established by Class of 1917 on same basis as the 1912 fund			
	1,122.88	1,122.88	60.76
Class 1919 Fund:			
Established by Class of 1919 on same basis as the 1912 fund			
	\$ 695.82	695.82	17.40
41 College Land Scrip Fund:			
Consists of proceeds received by State of New York from sale of Land Scrip apportioned to the State by the United States under the Morrill Act of 1862			
	688,576.12	688,576.12	34,428.80
Comstock, John H., Memorial Fund:			
Raised by students and alumni as a memorial to Prof. Comstock at the time of his retiring from active service and presented by Prof. Comstock to the University as a Fund for the purchase of books for the benefit of the Department of Entomology. Established 1914			
	2,516.42	84.00	2,600.42
Cornell Endowment Fund:			
Consists of the \$500,000 given by Ezra Cornell, pursuant to his agreement with the State, for the founding of the University, together with the net profits derived from the sale of lands located under the scrip purchased by him under his contract with the State, of August 4, 1866, except those in the Cascadilla Hall Fund			
	5,381,026.14	5,381,026.14	291,419.27
Corson, Caroline, French Prize Fund:			
Gift of Professor Hiram Corson in memory of his wife, Caroline Rollin Corson, income to be awarded as a French prize. Established in 1902 as a Dante Prize and converted into a French Prize in 1905			
	1,281.25	1,281.25	69.33

	July 1, 1919	Additions during Year	July 1, 1920	Income
Corson, Hiram, Browning Prize Fund: Gift of Professor Hiram Corson, income to be awarded as a Browning Prize. Established 1902.....	\$ 1,051.80		\$ 1,051.80	\$ 56.91
Cottage Renewal Fund: Consists of surplus income from Cottages owned by University, in excess of 5% of investment value transferred annually to current income, fund to be held to renew the cottages or replace investment therein. Established 1904.....	20,786.49	† 2,488.00	18,298.49	1,124.76
Crandall, Charles Lee, Prize Fund: Gift of the alumni of the College of Civil Engineering "to provide prizes intended to encourage original research to stimulate interest in matters of public concern, and to inspire in the students an appreciation of the opportunities which the profession of Civil Engineering offers them to serve their fellow men as intelligent and public spirited citizens." Established 1916.....	2,602.36		2,602.36	140.82
Daughters of the Revolution Endowment Fund: Gift of Miss Mary F. Hall, in honor of the New York State Society of the D.A.R., income to be added to fund during Miss Hall's lifetime and then, provided principal amounts to \$1,000, to be used for publication of such original studies in American History as are of permanent value, or as a suitable prize or prizes for research or superior attainment in American History. Established 1908.....	858.54	46.46	905.00	46.46
Dearstyne, Florence, Fund: Gift under the will of Miss Florence E. Dearstyne, income to be used under direction of Federation of Cornell Women's Clubs, in assisting needy young women students. Established 1914.....	2,367.71		2,367.71	128 12
Eastman Stage Fund: Gift of A. R. Eastman of Waterville, N. Y., in 1918 to endow the annual stage maintained by him by annual gift since 1909. The administration of the fund to be in the hands of the Dean of the College of Agriculture for the purpose of maintaining a stage or speaking contest each year on questions of public interest to agriculture and country life.....	3,000.00		3,000.00	127.50
Eidlitz, Marc, Instructorship in Civil Engineering: The gift of Otto M. Eidlitz of the Class of 1881. Established 1919.....		40,000.00	40,000.00	500.00
Fayerweather Fund: Gift under will of Daniel B. Fayerweather. Established 1892.....	331,528.56		331,528.56	17,939.02

† Loss

Fiske, Willard, Library Endowment Fund:

Gift under will of Willard Fiske to be used and expended for uses and purposes of the Library of the University. Established 1906

\$455,234.60

\$455,234.60

\$24,632.76

Fiske, Willard, Icelandic Book Fund:

Gift under will of Willard Fiske, income to be used for purpose of making additions to the Icelandic Collection in the Library of the University. Established 1906

8,000.00

8,000.00

432.88

Fiske, Willard, Icelandic Salary Fund:

Gift under will of Willard Fiske, income to be used for purpose of paying salary of an Icelandic amanuensis, whose time shall be given to care of Icelandic collection and who shall be a native of Iceland, educated or principally educated in Iceland, and recommended for said work by the Rector of the Latin School of Reykjavik. Established 1906

30,000.00

30,000.00

1,623.30

Fiske, Willard, Petrarch Salary Fund:

Gift under will of Willard Fiske, income to be used in paying salary or part salary of capable amanuensis, a portion of whose time shall be given to care of Petrarch and Dante Collections. Established 1906

12,000.00

12,000.00

649.32

Fiske, Willard, Petrarch Book Fund:

Gift under will of Willard Fiske, income to be used for purpose of increasing Petrarch and Dante collections in Library of the University. Established 1906

6,000.00

6,000.00

324.66

Fiske, Willard, Icelandic Publication Fund:

Gift under will of Willard Fiske, income to be used for purpose of publishing an annual volume relating to Iceland and the Icelandic collection in the Library of the University. Established 1906

5,000.00

5,000.00

270.55

Flower, R. P., Library Endowment Fund:

Established in 1901 by a gift of Mrs. Sarah M. Flower of \$10,000.00, the income to be used for the purchase and binding of books and periodicals for the Roswell P. Flower Library, founded by Governor Flower for the Veterinary College, by a gift of \$5,000 in 1897; \$1,000 remaining unexpended at the time of his death is added to the endowment

11,000.00

11,000.00

595.21

Fraser Scholarship Fund:

Gift of William Metcalf, jr., LL.B., 1901, of Pittsburgh, Pa., in memory of Alexander Hugh Ross Fraser, for eighteen years librarian of the Law Library, income to be awarded in two scholarships of \$100.00 and \$50.00 respectively to seniors in Law, the award to be based on scholarship, financial need, and character. Annual surplus to be paid to Cornellian Council. Established 1911

4,000.00

4,000.00

216.44

Fuertes Medal Fund:

Gift of late Estevan A. Fuertes, the income to provide two medals to be awarded annually, one to the student graduating, who has maintained the highest degree of scholarship during his four years, the other to the graduate, who may write a meritorious paper on some engineering subject. Established 1893.

Gage, Simon H., Fellowship Fund:

Raised by former students and friends of Prof. Gage to establish a fellowship in Animal Biology. The income is to be added to the principal until such time as the fund shall be sufficient to yield an annual income of \$500. Established 1916.

Gage, Susanna Phelps, Fund for Research in Physics:

Gift of Simon Henry Gage, B.S., '77 and Henry Phelps Gage, A.B., 1908, Ph.D., 1911, as a memorial to Susanna Phelps Gage, Ph.B., 1880, the income to be used in any way which at the time gives promise of advancing knowledge in Physics. Established 1918.

General Fund:

Consists of the endowment of not less than \$100,000 available for the maintenance of Rockefeller Hall, required as a condition precedent to John D. Rockefeller's gift.

Graduate Prize in Philosophy:

The income to be placed at the disposition of the Philosophical Department, and for the present to be awarded to that graduate student who submits the best paper embodying the results of research in the field of Philosophy. Established 1912.

Grimes, Arthur Middleton, Fund:

The gift of Mrs. Augusta E. Grimes in memory of her son, Arthur Middleton Grimes, B.S., 1915. The income after three years to be used for payment of salaries. Established 1919.

Guiteau Student Loan Fund:

Gifts under the wills of Frederick W. Guiteau (\$178,767.34) and Mrs. Nancy G. Howe (\$94,689.03), together with loans repaid, the income to be used in advancing and assisting needful, worthy young men in pursuing their studies in the University. Established 1904.

Guilford Essay Prize Fund:

Gift under will of James B. Guilford to establish a prize the object whereof shall be the promotion of a high standard of excellence in English Prose Composition. Established 1902.

July 1, 1919	Additions during Year	July 1, 1920	Income
\$ 1,000.00		\$ 1,000.00	\$ 54.11
3,258.48	\$ 176.32	3,434.80	176.32
10,000.00		10,000.00	541.10
106,000.00		106,000.00	5,735.66
571.36		571.36	30.92
	5,000.00	5,000.00	197.92
339,418.99	11,496.66	350,915.65	18,365.97
3,000.00		3,000.00	162.33

Hall, Mary F., Scholarship Fund:

Gift of Mary F. Hall, income to be paid to her during her lifetime, and at her death to be used for scholarships. Established 1902

\$16,500.00

\$ 16,500.00

\$ 892.82

Harris, Lucy, Fund:

Gift of George W. Harris as a memorial to his wife, Lucy Thurber Harris, income to be expended each year in purchase of English poetry of the Victorian Era and of biography and criticism connected therewith. Established 1893

1,000.00

1,000.00

54.11

Haviland Scholarship Fund:

Gift of \$500 under the will of John G. Haviland of Glens Falls, N. Y., to be invested until such time as a bequest under the will of his daughter, Bernice Haviland Guernsey, shall be paid to the University, when the income of both is to be applied to scholarships for girls residing in Warren County, N. Y. Established 1916

600.40

32.50

632.90

32.50

Hooker, Elon H., Fellowship Fund:

Gift of Elon H. Hooker, the income to be paid over to Mrs. Mary P. Fuertes, wife of the late Esteven A. Fuertes during the term of her life and at her death to be used for the establishment of a Fellowship in Hydraulic Engineering. Established 1919

8,500.00

8,500.00

Infirmary Endowment Fund:

Gift of Dean and William H. Sage, income to be used for the maintenance and needs of the Cornell Infirmary, established by them as a memorial to their father, Henry W. Sage, said infirmary being the former residence of Henry W. Sage, and valued at \$60,000. Established 1897

100,000.00

100,000.00

5,411.00

Ingersoll, Clayton C., Memorial Fund:

The gift of Mr. and Mrs. Winthrop Ingersoll in memory of their son, Lieutenant Clayton C. Ingersoll of the Class of 1917, who was killed in France, April 26th, 1918. The income to be used for the payment of salaries of the instructing staff. Established 1920

1,000.00

1,000.00

Irvine, Frank, Lectures:

Founded by the Conkling Chapter of Phi Delta Phi, income to be used in providing special lectures in College of Law. Established 1913

1,743.25

1,743.25

94.33

Kenney Endowment Fund:

Gift of Eudorus C. Kenney of the Class of 1882, the net income to be used for one or more scholarships with preference for students from the town of Truxton, Cortland County, N. Y. Established 1918

41,914.24

41,914.24

2,268.01

	July 1, 1919	Additions during Year	July 1, 1920	Income
Knickerbacker, John, Fund: The gift of John Knickerbacker, 1887, to provide financial aid to students in Cornell University who lack means for adequate support and have good minds, healthy and strong bodies, good moral character, sound moral opinions and beliefs, are earnest and persevering workers and come from parents known to be or to have been good citizens and both born in the United States. Established 1919	\$25,000.00		\$25,000.00	\$1,500.00
Kuichling, Emil, Library Endowment Fund: The gift of Mrs. Sarah L. Kuichling. The income to be used for additions to "The Library of Emil Kuichling, C.E.," given by Mrs. Kuichling to the College of Engineering. Established in 1920		\$ 200.00	200.00	2.50
Law School Fund: Gift of Douglass Boardman, income to be used for a Law Prize. Established 1887	2,000.00		2,000.00	108.22
Messenger, Luana L., Prize Fund: Gift of H. J. Messenger in memory of his mother, for an annual prize to the student writing the essay giving evidence of the best research and most fruitful thought in the field of human progress or the evolution of civilization. Established 1902	5,000.00		5,000.00	270.55
Meyer, Edgar J., Memorial Fellowship Fund: Gift of Mr. Eugene Meyer and his wife Harriet Meyer, in memory of their son, income to be awarded annually as a fellowship in Engineering research, to any graduate of an accepted school of Mechanical or Electrical Engineering, and not to be held by the same person more than two years. Established 1913	10,000.00		10,000.00	541.10
Miller, Jane; Prize Fund: Gift of Frank H. Miller of New York City, in 1920, to endow the prize maintained by him by annual gift since 1912. The interest is to be used for an annual prize or prizes in Physiology in the Veterinary College, to be called in memory of his Mother, "The Jane Miller Prizes in Physiology."		1,000.00	1,000.00	12.50
Pack, C. Lathrop, Fund: Gift of Charles Lathrop Pack to be used "in the interest of forestry." The interest is now used by the Faculty of the Department of Forestry as an annual prize. Established 1915	500.00		500.00	27.06
Padgham, Frank William, Scholarship Fund: Gift of Amos Padgham to found a scholarship in Sibley College in memory of his son. Established 1892	3,000.00		3,000.00	162.33

Parkin, Grenville W., Memorial Fund:

The gift of Mrs. Louisa F. Beam in memory of her son, Lieutenant Grenville W. Parkin of the Class of 1911. The income to be used for the payment of salaries of the instructing staff. Established in 1919

\$ 1,000.00 \$ 1,000.00 \$ 29.17

Polish Student Loan Fund:

Gift from Polish students at Cornell to be disbursed to candidates presented by members of the Polish Club of the University. Established 1909

\$ 128.00 128.00 6.92

Professorial Pension Fund:

Consists of payments by professors admitted to the benefits of the pension Fund with accrued income.

47,328.61 3,962.87 51,291.48 2,560.95

Ring Memorial Fund:

Gift under will of Charles A. Ring, income to be used in advancement of Horticultural Science.

1,000.00 1,000.00 54.11

Roberts, Charles H., Scholarship Fund:

Gift of Charles H. Roberts of Oakes, Ulster Co., New York, income to be used in payment of five equal annual scholarships in College of Agriculture and open to all races of mankind, regardless of color, or political or religious creeds, of good moral character and required qualifications, preference to be given to intelligence and financial inability. Established 1906.

30,000.00 30,000.00 1,200.00

Russel, William M., Memorial Fund:

The gift of Mr. Henry Russel in memory of his son of the Class of 1917 who gave his life on the Marne, August 11, 1918. The income to be used for the payment of salaries of the instructing staff. Established 1919

5,000.00 5,000.00 106.25

Sage College Endowment Fund:

Part of the gift of Henry W. Sage of \$250,000, on condition "that instruction shall be afforded to young women by the Cornell University, as broad and as thorough as that now afforded to young men." The balance of the gift is invested in the women's residential hall known as Sage College. Established 1872

109,300.00 109,300.00 5,914.22

Sage, Dean, Sermon Fund:

Gift of Dean Sage in 1872 as an endowment of Sage Chapel and increased by recent gifts from Mrs. Sage

75,000.00 75,000.00 4,058.25

Sage, Library Endowment Fund:

Gift of Henry W. Sage for endowment of Library. Established 1891

300,000.00 300,000.00 16,233.00

Sage, Sarah M., Endowment Fund:

The income, or in the discretion of the University, the principal also, to be used to promote the advancement of Medical Science by the prosecution of research at Ithaca, in connection with any and all the subjects at any time embraced in the curriculum of the Cornell University Medical School. Established 1915

50,000.00 50,000.00 2,705.50

	July 1, 1919	Additions during Year	July 1, 1920	Income
Sage, Susan E. Linn, Professorial Fund:				
Gift of Henry W. Sage, to endow the chair of Ethics and Philosophy. Established 1885.....	\$ 50,000.00		\$ 50,000.00	\$ 2,705.50
Sage, Susan E. Linn, School of Philosophy Fund:				
Gift of Henry W. Sage to enlarge basis of Susan Linn Sage Foundation and establish the Susan Linn Sage School of Philosophy. Established 1891..	200,000.00		200,000.00	10,822.00
Sage, William H., Pension Fund:				
Gift of \$150,000 to found a pension fund for full professors excluding profes- sors in the Medical College in New York City, or in State or National Institutions at Ithaca, or elsewhere, together with income received thereon. Established 1903. (See Schedule XXVI)	329,866.84	\$ 14,327.10	344,193.94	17,849.10
Sampson, Frances, Fine Arts Prize:				
Gift of Prof. Martin W. Sampson in memory of his wife, to be awarded in books or artistic reproductions and not in money to that student in the University who shows the most intelligent appreciation of the graphic arts and architecture. Established 1909	600.00	400.00	1,000.00	32.47
Schiff, Jacob H., Endowment Fund:				
Foundation for Human Civilization. Established 1912	100,000.00		100,000.00	5,411.00
Seidell, William C., Book Fund:				
Gift of Mr. and Mrs. Gerritt S. Miller, income to be used to purchase books for poor young men working their way through College of Civil Engineer- ing. Established 1905	1,165.16		1,165.16	63.05
Semi-Centennial Endowment Fund:				
Gifts toward the increase of the permanent endowment of the University, contributed through the Semi-Centennial Endowment Committee and not yet established on the University books as separate funds. (See Schedule XXVII)	61,280.00	908,811.20	970,091.20	*24,850.02
Sibley College Endowment Fund:				
Gift of Hiram Sibley. Established 1884	50,000.00		50,000.00	2,705.50
Smith, Goldwin, Fund:				
Gift under will of Goldwin Smith to be used for promotion especially of liberal studies, language ancient and modern, literature, philosophy, his- tory and political science, for which provision was made in Goldwin Smith Hall. Established 1911. One hundred seventy-five thousand dollars of this fund is set aside, the income to be used for the Goldwin Smith Special or Supernormal Salary Fund, Lectureship Fund, Faculty Prize Fund, Reading Room or other appropriate purposes	683,016.29		683,016.29	36,958.10

*Note: \$7,778.01 was paid in during the year as interest on subscriptions.

Smith, Goldwin, Hall Reading Room Fund:

A portion of the \$4,000 gift of Mr. Goldwin Smith made in 1909 for the Reading Room in Goldwin Smith Hall. Converted in 1914 into a fund, income to be available for the maintenance of same.

\$ 2,700.00	\$ 2,700.00	\$ 146.10
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Smith, Horace I., Fund:

Gift under the will of Mr. Smith, the income to be added to the principal until the fund shall reach the sum of \$20,000, the income then to be expended in assisting needy deserving students under specified restrictions. Established 1916

6,496.17	\$ 351.51	6,847.68	351.51
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Smith, Judson N., Scholarship Fund:

Gift of Mrs. Sarah L. Smith to found a scholarship in the College of Civil Engineering in memory of her son and to be awarded under such rules as the University may enact, on the basis of intelligence, and financial inability, provided, however, that the student be of good moral character and meet the required qualifications. Interest at the rate of four per cent upon the fund to be paid to Mrs. Smith during her lifetime, the scholarship to take effect at her death.

3,250.00	3,250.00	175.86
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Stambaugh, John, Professorship Fund:

Gift of John Stambaugh, 1884, the income to be devoted to the salary of a Professor of History. Established 1919

100,000.00	100,000.00	5,000.00
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State Scholarship Alumni Fund:

Being the nucleus of a fund to assist needy students. Established in 1914, by a gift of G. W. Graves, A.B., 1905, M.D., 1908, of the equivalent of the state scholarship held by him. . . .

401.00	401.00	21.70
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Thompson, William Delmore, Scholarship Fund:

Anonymous gift to found a scholarship in memory of William Delmore Thompson for the benefit of self supporting students in Mechanical Engineering, to be awarded at the entrance of the Junior year and if the student's work prove satisfactory to continue through his Senior year. Established 1919.

1,000,00	1,000,00	54.11
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Thompson, William Delmore, Endowment Fund:

Gift of Mrs. Bertha D. Higgins to the University Endowment in memory of
William Delmore Thompson, 1918. Established 1919.....

I,000.00 I,000.00 54.11

Town of Spencer Scholarship for Young Women Fund:

Gift of Miss Mary F. Hall to found a scholarship for young women of the Town of Spencer, N.Y., the income, however, to be paid to her during her lifetime.

2,500.00	2,500.00	135.28
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Treman, Robert H., Fund:

The gift of Messrs. J. S. Alexander, George F. Baker, Allen B. Forbes, Walter E. Frew, G. McGarrah, J. P. Morgan, Seward Prosser, Charles H. Sabin, Jacob Schiff, Benj. Strong, F. A. Vanderlip, Martin Vogel, Albert H. Wiggin, and William Woodward, his recent associates in the Liberty Loan Committee of the Second Federal Reserve District "as an enduring testimony to the unselfish, devoted, and distinguished services in finance rendered to the Nation and its financial capital during the critical period 1916-1919, by Robert H. Treman, and with appreciation of the sterling character and attractive personality that have won for him our respect and esteem", with the understanding that Mr. Treman shall have the privilege of designating the use to which the income from this fund shall be applied. Established 1920

Vail Endowment Fund:

Gift under the will of Edwin G. Vail of Dutchess County, the income to be expended in the aid of needy students from Dutchess County, who may, in the annual examinations therefor succeed in winning a State Scholarship in Cornell University. Established 1916

50 Wentz, John Leisenring, Prize Fund:

Gift of Mrs. Sarah B. Audenreid, the income to be used for a scholarship bearing the name of her late husband, John Leisenring Wentz of the Class of 1898, and to be awarded to a student in Engineering. Established 1920.

White Veterinary Prize Fund:

Gift of Horace K. White, income to be awarded as prizes to meritorious students in Veterinary Science

White Spanish Prize Fund:

Gift of J. G. White, Class of 1885, to found three annual prizes of \$100 each, in Spanish, any excess of income or profit from the sale of the securities to be added to the principal. Two of the prizes to be given for excellence in Spanish to students who are citizens or residents of the United States, one to a student in the engineering colleges and the other in any of the other colleges; the third prize to be given, for excellence in English, to students who are citizens or residents of the Latin-American Republics and for the next ten years, of Porto Rico or the Philippines. Established 1914

Wilson Endowment Fund:

Gift under the will of Mrs. Mary Northrup Wilson to carry out the wish of her son, Fred Lewis Wilson, to found a scholarship of not more than two years each for undergraduates in Sibley College.

July 1, 1919	Additions during Year	July 1, 1920	Income
	\$21,500.00	\$21,500.00	\$ 555.42
\$10,000.00		10,000.00	541.10
	5,500.00	5,500.00	68.75
500.00		500.00	27.06
7,134.75	186.06	7,320.81	386.06
3,851.35		3,851.35	208.40

Women's Guild Fund:

Gift of women interested in the University, income to be used to aid needy sick students. Established 1892

Women Students' Loan Fund:

Consists of former Students' Loan Fund, income to be loaned to needy women students, and increased in 1913 by \$7,000 assigned to the fund by the late President Andrew D. White from funds placed at his disposal by Andrew Carnegie

Woodford Medal Fund:

Gift of Stewart L. Woodford, for prizes in Oratory. Established 1870. . . .

Wurts Loan Fund:

Gift of \$2,000 by Alexander Jay Wurts, in memory of his mother, income to be loaned to students of Sibley College to "help lift the man's burden from the boy's shoulders." Additions by Sibley students. Established 1912.

Medical College Endowment Fund:

The gift of Col. C. H. Payne, the income to be applied to the maintenance and operation of the Cornell University Medical College in the City of New York. Established 1913

Medical Increment Fund:

Established on recommendation of Medical College Council, "the sum of \$5,000 to be set aside annually to constitute an 'increment fund' the income of which may be expended, and the principal of which or any portion thereof may from time to time be expended in case of need for permanent betterments or additions to the plant of the Medical School in New York City." Established 1914

Loomis Laboratory Endowment Fund:

Consists of the endowment of Loomis Laboratory turned over to the University by its Trustees at the time the laboratory was transferred to Cornell. Established 1899

Polk, J. M., Prize Fund:

Gift of William M. Polk to found a prize in the Cornell Medical College at
New York in memory of his son. Established 1905

Polk, John Metcalfe, Scholarship Fund:

Gift under the will of Dr. William Mecklenburg Polk, former Dean of the Medical College. The income to be expended as a scholarship in the Medical Department of the University. Established in 1919

\$ 6,557.41		\$ 6,557.41	\$ 354.82
26,709.63	\$ 251.38	26,961.01	1,445.26
2,500.00		2,500.00	135.28
2,267.74		2,267.74	122.71
9,978,370.04	1,019,585.27	10,997,955.31	559,447.76
4,850,000.00		4,850,000.00	170,438.98
20,000.00		20,000.00	1,082.20
118,176.79		118,176.79	6,394.54
10,000.00		10,000.00	541.10
	5,000.00	5,000.00	208.33
14,976,546.83	1,024,585.27	16,001,132.10	738,112.91

	July 1, 1919	Additions during Year	July 1, 1920	Income
Residential Halls Funds Reserve:				
Baker Court Fund:				
The gift of George F. Baker for the construction of the residential halls for men known as Baker Court	\$ 358,249.24		\$ 358,249.24	\$ 12,595.12
Cascadilla Hall Fund:				
A portion of the Cornell Endowment Fund invested in Cascadilla Hall	120,000.00		120,000.00	6,554.10
Founders Hall Fund:				
The gift of the alumni of the University through the Cornellian Council to cover, with the net income of the building, the cost of the residential hall for men known as Founders Hall	101,723.53		101,723.53	4,432.23
Prudence Risley Hall Fund:				
The gift of Mrs. Russell Sage for the construction of the residential hall for women, named Prudence Risley in memory of the mother of Mr. Sage...	293,154.34		293,154.34	†4,099.50
Sage College Building Fund:				
A portion of the Sage College Endowment Fund, and income from the building, used for the construction of the residential hall for women named Sage College	210,662.15		210,662.15	3,050.06
Three Central Avenue Fund:				
A portion of the income of the University invested in the building at 3 Central Avenue and now used as residential hall for unmarried members of the staff and for the University Club	13,000.00		13,000.00	745.79
	16,073,336.09	\$1,024,585.27	17,097,921.36	761,390.71
Income due special funds	251,379.86		276,077.17	
Premium and discount	161,569.81		191,971.02	
Cash balance current income, less amount due special funds	215,491.61		309,467.12	
	16,701,777.37		17,875,436.67	

†Loss.

EMMONS L. WILLIAMS

At the close of the last fiscal year the resignation of Comptroller Williams took effect. The following is from the minutes of the Board of Trustees of the University, May 31, 1919:

"In accepting the resignation of Emmons Levi Williams as Comptroller of Cornell University, to take effect June 30, 1919, the Board of Trustees desires to record its sense of the unusual importance of the services rendered by Mr. Williams to the University throughout a long term of years. He was appointed Assistant to the Treasurer in May, 1872, and Acting Treasurer in September, 1879. He was elected Treasurer of the University on June 17, 1885, and he held that office until June 16, 1914, when he was elected to the newly created office of Comptroller. He was Secretary of this Board from June, 1894, until November, 1914.

Mr. Williams has used great ability not merely in his custody and administration of the University's funds and in his conduct of administrative matters generally, but also in the working out of the University's policy with respect to the investment of its endowment funds. The Finance Committee of the Board has placed great reliance upon his knowledge of financial and industrial conditions, his judgment in the estimation of value and security, and his discretion in the care of investments. The fact that this University enjoys a high average rate of income from funds securely invested is due in a large measure to Mr. Williams's financial acumen and constant watchfulness.

The significant thing in Mr. Williams's work for this University is his devotion of a rare skill, the fruit of years of laborious study, to an unselfish public service. Universities cannot buy service of this character from selfish persons. The reward of his labor is seen in the endowment of Cornell University, a public trust, unimpaired after a half-century. That result, and the example he has set of unremitting labor for a philanthropic purpose, entitle him to public thanks.

The members of this Board individually have learned to prize Mr. Williams's courtesy in all personal relations. They wish for him after his retirement many years of happy life, with the leisure and rest he has so abundantly earned."

At the same meeting Mr. Williams was elected a member of the Board of Trustees to fill the vacancy caused by the death of Ex-President Andrew D. White, and later made a member of the Trustee Committee on Finance. Thus the University will continue to benefit by Mr. Williams's intimate knowledge of every detail of its growth, and particularly by his wide experience in the field of investment.

SEMI-CENTENNIAL ENDOWMENT FUND

On April 29, 1916, the Board of Trustees, acting upon the recommendation of the Semi-Centennial Celebration Committee authorized the appointment of a committee to secure gifts for university endowment, including buildings and betterments, the work to be carried on in co-operation with the Cornellian Council. It further provided that all gifts for university endowment, and also for buildings and betterments, received from that date to October, 1918, the date of the proposed Semi-Centennial celebration, be considered in the aggregate as constituting such Semi-Centennial Endowment Fund.

The committee was appointed and some work done preparatory to a general campaign. This work was, however, interrupted by the entry of the United States

into the war, and the Semi-Centennial celebration was indefinitely postponed and the work of the Endowment Committee practically discontinued. After the signing of the armistice and on November 30, 1918, the Board of Trustees appointed for the same purpose a new committee consisting of Trustees Walter P. Cooke, Henry R. Ickelheimer, Henry J. Patten, Charles M. Schwab, John L. Senior, George J. Tansey, Charles E. Treman, John C. Westervelt and J. DuPratt White whom the committee subsequently selected as chairman. Mr. Edwin N. Sander-son was afterward added to the committee in place of Mr. Tansey whose term as Trustee had expired.

To co-operate with this committee of the Trustees, the Associate Alumni appointed the following committee: John L. Tiernon, chairman, Romeyn Berry, Donald R. Cotton, John P. Dods, Raymond P. Morse, and Harold D. North. The Cornellian Council also appointed to assist the Endowment Committee the following: Edward L. Stevens, chairman, Walter P. Cooke, George D. Crofts, James K. Fraser, and Clarence A. Snider. J. DuPratt White and Walter P. Cooke were appointed alternate chairmen of the combined committee. Harold Flack was appointed campaign director.

The Trustees on May 31, 1919, adopted the following resolution: "All gifts for University endowment and for buildings and betterments, and other purposes received by the University from April 29, 1916 to December 31, 1919, shall be considered in the aggregate as constituting the Semi-Centennial Endowment Fund." Subsequently the time was extended to December 31, 1920.

The results of the activities of the Semi-Centennial Endowment Committee to July 1, 1920, are shown in the following table:

SEMI-CENTENNIAL ENDOWMENT

July 1, 1920

	Subscriptions	Payments Received	Outstanding
Salary Endowment July 1, 1919 .	\$61,280.00	\$61,280.00	
Alpha Chi Rho Professorship . . .	500.00		500.00
Alpha Delta Phi " . . .	44,700.00	16,250.00	28,450.00
Alpha Sigma Phi " . . .	500.00		500.00
Alpha Tau Omega . . .	1,500.00		1,500.00
d'Autremont, Chas., Jr. " . . .	75,000.00	5,000.00	70,000.00
Beta Theta Pi " . . .	500.00		500.00
Chi Phi " . . .	12,600.00		12,600.00
Chi Psi " . . .	22,516.72	2,611.72	19,905.00
Class of 1877 " . . .	250.00		250.00
Class of 1891 " . . .	500.00		500.00
Class of 1895 " . . .	8,090.00		8,090.00
Class of 1896 " . . .	500.00		500.00
Class of 1899 " . . .	200.00		200.00
Class of 1901 " . . .	1,250.00		1,250.00
Class of 1910 " . . .	1,150.00		1,150.00
Cornell Society of Civil Engineers	5,100.00	1,600.00	3,500.00
Corporation Service	50,000.00	16,200.00	33,800.00
Delta Chi Professorship	6,800.00	300.00	6,500.00
Delta Kappa Epsilon Professorship	62,345.00	8,600.00	53,745.00
Delta Phi " . . .	94,311.00	26,510.00	67,801.00
Delta Tau Delta " . . .	4,000.00		4,000.00
Delta Upsilon " . . .	70,335.00	18,170.00	52,165.00
Earl, Charles Bull, Memorial Fel- lowship	10,000.00		10,000.00

COMPTROLLER'S REPORT

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	Subscriptions	Payments Received	Outstanding
Eidlitz, Marc, Instructorship in Civil Engineering	\$ 40,000.00	*\$40,000.00	
French, W. H. Professorship....	4,012.00		\$ 4,012.00
Grimes, Arthur Middleton, Memorial Fund	5,000.00	*5,000.00	
Ingersoll, Clayton C., Memorial Fund	1,000.00	*1,000.00	
Kappa Alpha Professorship....	7,338.02	888.02	6,450.00
Merrill, Ogden "	9,150.00	125.00	9,025.00
New England Women's Club	155.00		155.00
Parkin, Grenville W., Memorial Fund	1,000.00	*1,000.00	
Phi Delta Theta Professorship..	7,400.00	100.00	7,300.00
Phi Delta Upsilon "	190.00		190.00
Phi Gamma Delta "	2,500.00	500.00	2,000.00
Phi Kappa Psi "	250.00		250.00
Phi Kappa Sigma "	16,085.00	895.00	15,190.00
Phi Sigma Kappa "	10,700.00		10,700.00
Philadelphia Club "	1,300.00		1,300.00
Pi Kappa Alpha "	500.00		500.00
Porter, A. A. Memorial	150.00		150.00
Psi Upsilon Professorship	121,147.40	56,678.40	64,469.00
Russel, William M., Memorial Fund	5,000.00	*5,000.00	
Seal and Serpent Professorship..	1,500.00		1,500.00
Shaler, Ira "	350.00	230.00	120.00
Sibley College Endowment	10,000.00	10,000.00	
Sigma Alpha Epsilon Professorship	65.00		65.00
Sigma Chi "	22,330.00	225.00	22,105.00
Sigma Phi "	40,275.00	9,150.00	31,125.00
Stambaugh, John (Reported July 1, 1919)	100,000.00	100,000.00	
Sweet, John A. Professorship....	103,385.00	18,850.00	84,735.00
Tau Epsilon Pi "	50.00		50.00
Theta Delta Chi "	14,650.00	1,100.00	13,550.00
Theta Xi "	2,200.00		2,200.00
Treman, Robert H., Fund	30,000.00	*21,500.00	8,500.00
Wentz, John L. Scholarship	5,500.00	*5,500.00	
Wilder, Thomas Edward, Fund..	4,000.00		4,000.00
Zeta Psi Professorship	7,475.00		7,475.00
Undergraduate Class	900,530.00		900,530.00
Unallocated	3,228,767.57	831,955.96	2,396,611.61
Totals July 1, 1920	\$5,237,882.71	\$1,266,219.10	\$3,971,663.61

The gifts to the University from April 29, 1916, to July 1, 1920, not received through the Endowment Committee and reported annually as donations, aggregate:

Special Endowments	\$677,648.41
Buildings	241,723.53
Betterments	4,924.02
Current Expenses	334,457.46
	\$1,258,753.42

Relying upon the subscriptions to the Semi-Centennial Endowment Fund the Trustees for the year 1920-21 made material increases in the salaries of the

*Established on books as separate funds. See Schedule XXVII.

instructing staff. The following table gives the average salary of members of the instructing staff in the University at Ithaca, (excluding State colleges) as it was on May 1, 1919, when the Trustees pledged for the purpose of salary increases, the income from the undesignated endowment to be raised by the committee. As the year 1918-19 was an unusual year, due to war conditions, the figures taken are from the last normal university year, which was 1916-17. There is also shown the corresponding figures for the academic year 1919-20, and for 1920-21. The figures for 1920-21 are based upon appropriations while those of the other two years are from actual expenditures.

	AVERAGE SALARIES			
	Professors	Asst. Professors	Instructors	Total Salaries of Instructing Staff
May 1, 1919	\$3,163.00	\$1,734.00	\$1,008.00	\$575,032.00
1919-1920	3,597.00	2,215.00	1,301.00	712,065.00
1920-1921	4,100.00	2,638.00	1,479.00	918,270.00

From these figures it will be seen that the salaries of professors have been increased on the average nearly 30 per cent, the salaries of assistant professors 52 per cent, and the salaries of instructors 46 per cent. Upon the basis of the present appropriations the University faces a deficit of approximately \$50,000 for the year, with the expectation that so much of this as is not met by economies and unexpected income will be covered by the contributions through the Cornellian Council.

CORNELLIAN COUNCIL

During the year, in addition to the generous gifts of the alumni to the Semi-Centennial Endowment Fund, as stated in detail above, the alumni also continued their contributions through the Cornellian Council, and there was turned over to the University from this source the sum of \$53,633.03. Of this sum, \$3,077 was designated for the women's dormitory fund, and \$20,000 was appropriated by the Trustees for continuing the work upon that portion of the alumni field to be used for baseball. This appropriation it is expected will make the field, equipped with temporary bleachers, available for the use of the 'varsity team.

As about \$15,000 of the amount turned over to the University by the Cornellian Council, June 30, 1919, represented a balance collected but not turned over during the preceding year, the gift for the year 1919-1920 was only \$10,000 less than that of the year before, which is a gratifying showing when it is remembered that all alumni effort has this year been expended upon the Semi-Centennial Endowment Fund somewhat to the neglect of the Cornellian Council. Since the organization of the Council it has through its earnest efforts collected and paid over to the University the following sums:

1913	\$20,000.00
1914	20,000.00
1915	20,000.00
1916	30,000.00
1917	54,000.00
1918	55,020.00
1919	78,811.71
1920:	
C. U. C. A.	\$ 25.00
Women's Dormitory Fund	3,077.00
Class of '89 Endowment	247.00
Salaries	75.00

COMPTROLLER'S REPORT

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Gage Fund.....	\$ 15.00	
Class of 1920 Fund.....	200.00	
Class of 1921 Fund.....	55.00	
Class of 1922 Fund.....	20.00	
Class of 1923 Fund.....	575.00	
Income Class of 1920 Fund.....	25.00	
Income Class of 1921 Fund.....	24.00	
Income Class of 1922 Fund.....	2.00	
Income Class of 1923 Fund.....	10.00	
Unrestricted.....	49,283.03	\$ 53,633.03
		<hr/>
		\$331,464.74

DONATIONS 1919-20

The following is a list of gifts to the University that passed through this office. It does not include many gifts made directly to departments.

Anonymous Gift through Col. Barton for Summer Military Camp ..	\$ 100.00
Anonymous Gift through Dean Woodruff for Law School.....	200.00
Anonymous Gift through Dr. Niles to Medical College.....	2,500.00
Anonymous Gift for Medical College toward assessment on International Traction Bonds	53,996.00
Chautauqua County Tomato Improvement Association for Industrial Fellowships	500.00
Contributions to Class of '19 Fund.....	695.82
Cooke, Dr. R. A., for Medical College.....	6,350.00
De Carreno, Mrs. E. S., for Medical College	100.00
Eden Valley Association for Industrial Fellowship.....	1,000.00
Federation Cornell Women's Clubs for French Scholarship.....	561.50
Hampton Potato Growers, for Industrial Fellowship.....	1,000.00
Harrington, Mr. A. M., for current expense.....	100.00
Hollingworth, W. G., for Veterinary Honorarium	50.00
Holstein-Friesian Association of America for a Fellowship	423.00
Jewish Aid Society for Assistance to Students.....	985.00
Kuichling, Mrs. Sarah L., for Library Fund.....	200.00
Miller, Dr. Frank H., for Jane Miller Veterinary Prize Fund	1,000.00
J. T. Morrison Estate, for prize in poetry	100.00
North Fork Fellowship Association for Industrial Fellowship.....	1,250.00
Polk, Estate of Dean W. M., for John Metcalfe Polk Scholarship	5,000.00
President White Library	440.40
Roessler & Hasslacher Chemical Co., for Industrial Fellowship	3,000.00
Sampson, Professor Martin, addition to Frances Sampson Fine Arts Prize	400.00
Sherman, John D., jr., for Comstock Memorial Fund	65.00
Southern Limestone Agricultural Association for an Industrial Fellowship	1,000.00
Standiff, Mr. H. C., for Class of '89 Endowment	25.00
Steuben County Seed Improvement for an Industrial Fellowship	1,000.00
Union Sulphur Company for Industrial Fellowship	4,000.00
Vogelstein, Mr. Ludwig, for Goethe Prize	50.00
Whitney, Mr. Payne, for Bellevue Clinic.....	12,000.00
Whitney, Mr. Payne, for Medical College.....	30,000.00
Williamson Vegetable Association for an Industrial Fellowship.....	1,500.00
Wilson Growers, for an Industrial Fellowship.....	1,000.00
Wright, Prof. A. H., for Comstock Memorial Fund	19.00
	<hr/>
	\$130,610.72
Contributions through Cornellian Council (See detail above).....	53,633.03
Contributions to Semi-Centennial Endowment Fund (See detail above)	\$1,104,939.10
	<hr/>
	\$1,289,182.85

COMPTROLLER'S REPORT

CLASSIFICATION OF INVESTMENTS

Domestic Public Securities .....	.105	\$1,881,726.12
Foreign Public Securities .....	.035	628,584.66
Railroad Bonds .....	.155	2,779,510.41
Public Utilities Bonds .....	.236	4,214,641.50
Lumber Bonds .....	.009	164,000.00
Industrial Bonds .....	.196	3,505,500.00
Miscellaneous Bonds .....	.009	153,814.45
Railroad Stocks .....	.071	1,265,500.00
Bank Stocks .....	.007	116,030.00
Industrial Stocks .....	.051	915,787.50
Miscellaneous Stocks .....	.011	198,571.25
Real Estate Mortgages .....	.035	619,483.48
Loans on Collateral .....	.000	5,099.75
Real Estate (Investment) .....	.011	196,771.15
Land Contracts .....	.000	1,800.00
Residential Halls .....	.061	1,096,789.26
Special Deposits .....	.002	25,151.07
Cash and Ledger Balances .....	.006	106,789.64
		<hr/>
	1.000	\$17,875,550.24

BUILDINGS AND GROUNDS

The general upkeep of the physical property of the university received more attention during the year than in the two years immediately preceding. There is yet much to do. Besides the upkeep, permanent improvements and changes were made to accommodate and provide for new conditions. This work included the erection of horse barns, storage building and garage for the use of the artillery unit of the Reserve Officers Training Corps at the University, the fitting up of quarters in the Armory and Gymnasium for the work in Hygiene and Physical Education, a new laboratory for the Geological Department in the south end of McGraw Hall, and the permanent improvement of the road near the intersection of West and University Avenues to furnish a proper approach to Baker Court.

Itemized reports of the Treasurer and of the Superintendent of Buildings and Grounds are appended hereto.

Respectfully submitted,

CHAS. D. BOSTWICK,
Comptroller.

NOTE: The complete reports of the Comptroller, the Treasurer, and the Superintendent of Buildings and Grounds, containing the schedules referred to above and others, and bearing the certificate of audit of Messrs. Haskins & Sells, certified public accountants, 30 Broad St., New York City, will be forwarded to alumni upon receipt of specific request addressed to the Comptroller, Cornell University, Ithaca, N. Y.

FORMS OF BEQUESTS TO CORNELL UNIVERSITY

GENERAL BEQUESTS

I hereby give, devise, and bequeath to Cornell University, at Ithaca, N. Y.,
the sum of.....
Dollars.

.....

BEQUEST FOR ENDOWMENT OF PROFESSORSHIP

I hereby give, devise, and bequeath to Cornell University, at Ithaca, N. Y.,
the sum of.....

.....
Dollars as an endowment for a professorship in said University, the income from
which said sum is to be used each year towards the payment of the salary of a
professor of said institution.

.....

BEQUEST FOR SCHOLARSHIP

I hereby give, devise, and bequeath to Cornell University, at Ithaca, N. Y.,
the sum of.....

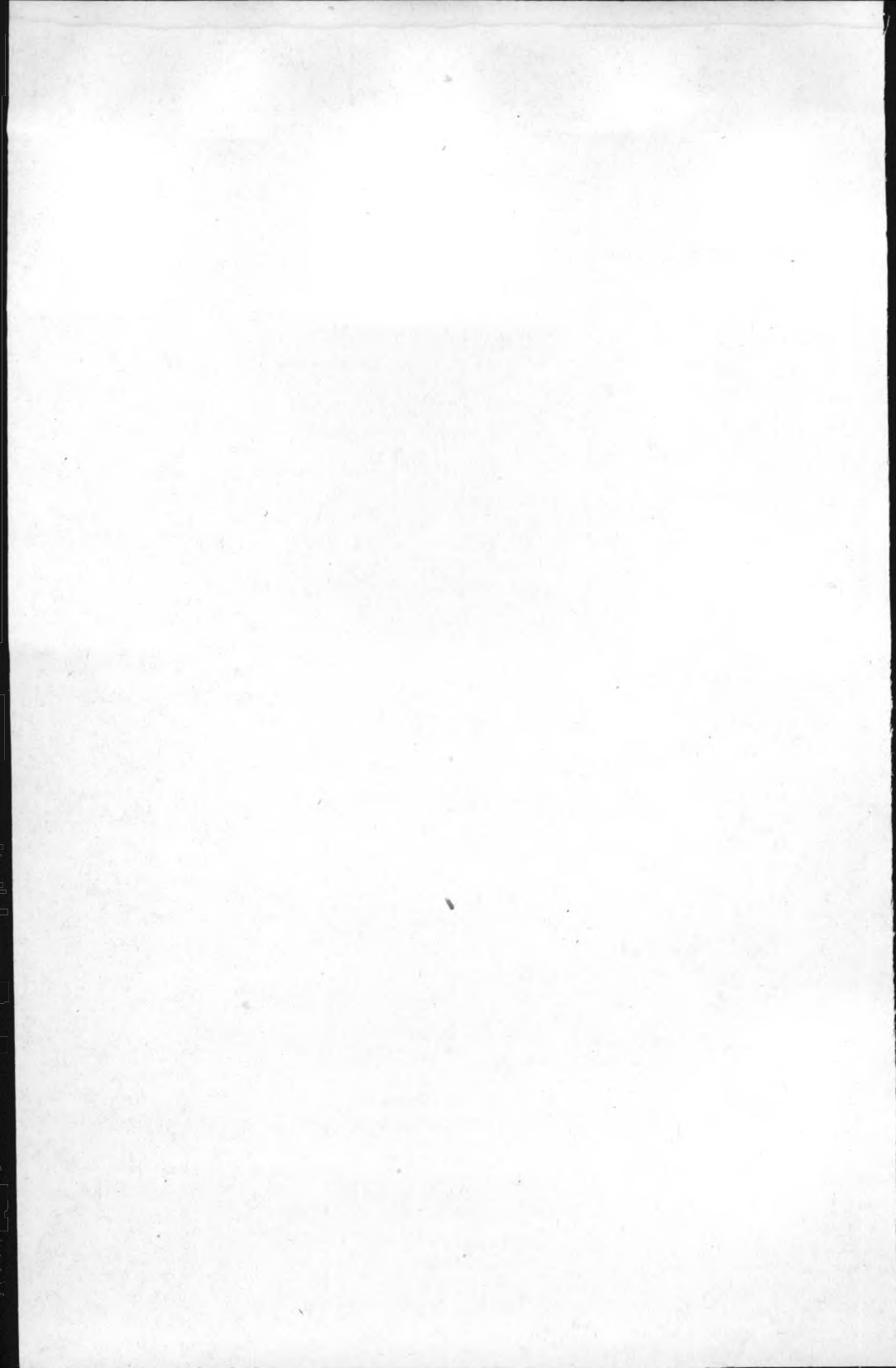
.....
Dollars, the income from which sum is to be used each year in the payment of an
undergraduate scholarship in said University, to be known as the.....

.....scholarship.

BEQUEST FOR A PARTICULAR PURPOSE DESIGNATED BY THE TESTATOR

I hereby give, devise, and bequeath to Cornell University, at Ithaca, N. Y.,
the sum of
Dollars to be used (or the income from which said sum is to be used each year)
for the purpose of.....

.....(insert purpose).



APPENDIX I

REPORT OF THE DEAN OF THE UNIVERSITY FACULTY

To the President of the University:

SIR: I have the honor to submit the following report of the University Faculty for the year 1919-1920.

During the academic year 1917-1918 the University's plant and curriculum were employed wholeheartedly in the service of the country engaged in war. In 1918-1919 the University's work was adjusted to the needs of students returned from service on the conclusion of peace. The past year has witnessed the happy restoration of our regular course of studies and normal activities. Many undergraduates who took up arms abandoned their University career after the signing of the armistice, and began at once a vocation; some of them because they felt that after the sacrifice of from one to two years they could no longer afford the time, others because they could not afford the expense, and others because they had lost the inclination, and still others because they could not "get down to study." Of those who returned to the University some are proceeding to the completion of the requirements for a degree, while others are fulfilling these requirements only in part and have become candidates for War Certificates instead of degrees. Thirty-nine undergraduates received this distinction on June 23 at the hands of the President. On March 12, 1920, the University Faculty voted to honor those undergraduates who had served in the World War and had completed a certain part of the curriculum, by enrolling them among the Alumni, and adopted the following form of certificate, in lieu of a diploma, to be awarded to students who, as a general condition, had been in residence two years at the University and had served two years in the armed forces of the United States or her Allies:

*"To whom these presents in honor of American citizenship may come,
Greeting:*

Cornell University records that

(Name)

an undergraduate in good standing in the College of _____ of Cornell University, enlisted in national service and honorably performed his duties therein, and has merited the esteem and good will of the University. Since by his services to our country he has in the judgment of the University been prevented from completing his academic course, therefore

CORNELL UNIVERSITY

in recognition of patriotic duty well discharged, awards to him all the rights and privileges of an alumnus of the University and orders that his name be carried among the alumni of the class of _____ with the designation War Alumnus.

Date

(Signature
of the President.)"

At the Commencement of 1920, the distinction of War Alumnus was conferred upon one hundred and ten former undergraduates who died while on national duty, the certificates being forwarded to their next of kin. This action of Trustees and Faculty was a new and pathetic reminder of the University's relation to the Nation, of the sacrifice it has made for public defense, and of the affectionate memory in which it holds its patriotic sons.

During the year the University Faculty has approved the recommendation of the Faculty of Sibley College that there be established the degree of Electrical Engineer (E.E.). The Faculty of the College of Architecture recommended the creation of the degree of Bachelor of Fine Arts (B.F.A.) and this recommendation was also approved. Regarding the degree of Electrical Engineer no new curriculum is involved, the change being merely a titular matter. Hitherto the degree of M.E. has been conferred on students who have specialized in Electrical Engineering. The degree of Bachelor of Fine Arts is based upon a new curriculum of studies covering four years of residence, and presupposes the satisfaction of fifteen standard units of entrance subjects. The requirements for graduation cover one hundred and forty university hours and the content of the curriculum is concerned primarily with education in the history of the fine arts, the principles of design, knowledge of drawing and such supplementary subjects as are important for the understanding and practice of the graphic and decorative arts. On June 22, the Board of Trustees approved the recommendations of the Faculty and established these two degrees.

The question of the best methods of co-operation between the Board of Trustees and the Faculty has been discussed at numerous Faculty meetings, a question that has been extensively considered by many of the universities of the country for a number of years, and more particularly since the issue of your report of 1911 dealing with this subject, which may now be regarded as the *locus classicus* on this topic. In the opinion of many members of the Faculty the present method of Faculty representation, which consists of three deputies of the Faculty, who sit on the Board with all the rights and privileges of Board members except the right to vote, is not wholly adequate. To provide for more complete co-operation between the two bodies, the Faculty has adopted the principle of a joint council and the measure has been forwarded to the Board for its concurrent approval and establishment. This plan is outlined in the following resolution adopted by the Faculty on March 20, 1920:

"That the Faculty approve the establishment of a Joint Council of the Board of Trustees and the Faculty for the consideration of questions of common interest to the two bodies. In the establishment of such Council the Faculty approves the following provisions: (a) The Council shall consist of eleven members, five members from the Board of Trustees, five members from the Faculty, the President of the University to be a member *ex officio* and Chairman; (b) All members of the Council shall have equal rights and powers; (c) Reports of the Council's deliberations and recommendations shall be submitted promptly to the Board of Trustees and to the Faculty; (d) The Council shall hold at least three regular meetings in each year and special meetings may be called by the President on his own initiative or on the request of four members of the Council; (e) The term of office of Faculty members of the Council shall be three years and they shall be elected by ballot."

The Faculty is of the opinion that, partly because of the constant availability of its resources, some plan such as that outlined above would be advantageous to the Board and Faculty for mutual orientation in problems of common interest.

One of the most important questions now confronting the University is the limitation of the number of students. The great increase of the undergraduate population has made necessary corresponding additions to the teaching staff, has rendered some of our more important laboratories obsolete in size and accommodations, and has added to the problems of the budget. On June 16, a committee was appointed by the President at the request of the Faculty to make a thorough study of this subject and to report its recommendations.

During the past academic year the University held its first Convocation in honor of scholarship. University exercises were suspended from 12 to 1 o'clock on April 9, 1920. Dr. Andrew West, Dean of the Graduate School of Princeton University, addressed the Faculty and students on the aims and ideals of education. The purpose of the Convocation is to promote a higher type of scholarship in the University and to give it formal recognition. The present plan of the University Faculty is to have a Scholarship Convocation early in the autumn in each academic year. On the Convocation program of April 9, 1920, there were listed three hundred and seventy-four names of students who had won scholastic distinction by their class standing in the several colleges, by winning prizes offered by the University, by membership in such societies as Phi Beta Kappa, Sigma Xi, Tau Beta Pi, Eta Kappa Nu, or the Order of the Coif, or by the award of University Undergraduate Scholarships. The event should become a valuable fixture in the University's traditions. In this connection I desire to refer to the action of the Trustees in restoring the number of University Undergraduate Scholarships to thirty-six. The action, taken in response to the request of the Faculty, guarantees the continuance in full force of this important leverage for the promotion of a high type of undergraduate scholarship.

On March 10, the Faculty was officially informed of your resignation from the presidency of the University. The announcement was received with great regret, and the Faculty's appreciation of your services to the University has already been placed in your hands in the form of resolutions. Your constant interest in the problems of the Faculty and the work of its various committees, your skillful guidance of its sessions as presiding officer, and your wise and open minded participation in its discussions will be long and gratefully remembered.

Respectfully submitted,
WILLIAM A. HAMMOND,
Dean of the University Faculty.

APPENDIX II

REPORT OF THE DEAN OF THE GRADUATE SCHOOL

To the President of the University:

SIR: I have the honor to present the following Report of the Graduate School for the academic year 1919-1920.

The present year has witnessed the resumption of normal conditions in the Graduate School, as in other parts of the University. The enrollment of graduate students is still somewhat less than in the years immediately preceding the war, but this is partially explained by the new system of tuition, which fortunately operates to deter from registration students without serious purpose. As a result of the special provision for instruction made by the University during the summer of 1919, there were 171 graduate students carrying on work during that term, which, added to the 408 students of the regular year, brought the total registration for the year 1919-1920 up to 579.

The table given on page ix shows the institutions from which graduate students have come to the University. Forty per cent of those enrolled in the Graduate School have received the first degree from one of the colleges of Cornell University. Of other institutions in the United States, the following have this year sent the largest number of graduate students: Mt. Holyoke, University of Indiana, Pennsylvania State College, Wellesley, Yale, and the University of Illinois. It is also interesting to note that there are 22 students from China, 18 from Canada, 5 from Brazil, 3 from South Africa, 3 from Turkey, 5 from Japan, 3 from the Philippines, 2 from Norway, and 1 from Jugo-Slavia.

On page ix, a table also indicates the number of students in each of the Groups of which the Faculty of the Graduate School is composed. The most striking fact here shown is that Group D (the Biological Group) has more than half of the graduate students in the University. This Group includes all the departments connected with the New York State Colleges of Agriculture and Veterinary Medicine that offer graduate work, and also the departments of the Medical College in Ithaca and New York City, as well as those of Zoology and Botany in the College of Arts and Sciences. Through the wise provision made by the Legislature for research in the State Colleges, certain departments are able to maintain professorships especially devoted to research and to the training of graduate students. As a result, the reputation of these departments and the opportunities they offer for advanced work have in a marked degree attracted the attention of scholars both in this country and abroad, and graduate students have been drawn here for study in these fields. This is a subject of congratulation for the University as a whole, and it also illustrates very clearly the benefits that accrue to the University through the presence in it of scholars whose strength is devoted primarily to the extension of knowledge.

On the other hand, it is equally important to note that in the other Groups the number of graduate students has not kept pace in recent years with the growth of the University as a whole. This can doubtless be explained in part at least by the recent tendency on the part of students to turn away from scholarship to a life of

business. Students of the present day frequently express the conviction that teaching does not offer rewards that would warrant them in spending years in graduate study in order to prepare for a life of teaching or research. It may properly be doubted, however, whether this statement in itself furnishes a complete explanation of the relative decline in advanced study in many divisions of the University. The question is a most important one and should be made the subject of careful consideration.

The quality of students is always a matter of more importance than their number, and this is especially true of the students in the Graduate School; for from the students now in our Graduate Schools will be drawn the teachers and leaders in scientific research upon whom the future must depend. From them in large measure must come the ideas and practical applications of the civilization of the next generation. The question of recruiting the profession of university teacher and investigator becomes, therefore, of the greatest importance. I take the liberty of quoting in this connection a passage from a report that I had the honor of making to the Faculty of the Graduate School in 1915:

"It seems obvious that every legitimate means should be employed to encourage students of ability who have the interests and the temperament necessary for this work to prepare themselves to become teachers and investigators. On the other hand, it is no less necessary to discourage in every legitimate way students who do not possess the proper natural qualifications from entering upon this career. If this latter end can be secured, perhaps it may indirectly contribute toward the former result. Graduate students should be selected from the fit; so long as every graduate of any reputable institution is welcomed, irrespective of natural ability, the best results will not be attained. * * *

"It is important to have students recognize that the doors of the Graduate School do not stand open to all; that only men of brains and energy need apply. The way should not be made smooth for the fearful and unambitious. It should be understood that graduate work is difficult and exacting; that scholarship is no 'safe and easy' career, but one that calls for the highest ability and gives scope for all the effort and enterprise that is possessed by the strongest and most ambitious students. If the possibilities and rewards of this life can be represented in their true perspective, the adventure of learning will not fail to attract students of intelligence and imagination. For this profession every university teacher should be a recruiting officer, rejecting the mediocre and unambitious student and choosing only the strongest and the best."

For some years the University has received a number of grants of money from commercial companies and growers of agricultural products, to be used in support of investigations in certain fields in which they had an especial interest. These investigations have usually been carried out by a student registered in the Graduate School who received an appointment for one or more years with a stipend which was known as an Industrial Fellowship. Appointments to Industrial Fellowships were made by the Board of Trustees on the recommendation of certain departments, and with the approval of the Dean of the college concerned. The question as to the best methods of administering such special subventions so as to ensure proper educational control has been for some time a subject of discussion and conference. There has been no feeling that the procedure followed in the past

has lead to any abuses, or that the educational interests of graduate students have been sacrificed by the contracts hitherto made with firms from which grants of money have been received; but consideration of the interests of graduate students in general has made it seem advisable that, in the future, appointments to Industrial Fellowships should be in the hands of the Graduate Faculty, which now has the responsibility of making appointments to the regularly endowed Fellowships. It was also felt that this Faculty should have an opportunity of passing upon the conditions under which students accepting these appointments are to carry on their candidacy for advanced degrees. After prolonged discussion of this subject between the various parties concerned, the following legislation was adopted by the Faculty on April 23, 1920:

1. Appointments to these Fellowships should be made by the Faculty of the Graduate School on the recommendation of the group of teachers concerned, in the same way as appointments are made to other Fellowships. Whenever possible, these fellowships should be thrown open to competition.

2. If the holder of an Industrial Fellowship is a candidate for an advanced degree, the terms and the conditions under which the Fellowship is given should be submitted for approval to the General Committee of the Graduate School.

3. It is undesirable that the stipend attached to these Fellowships should be greater than is sufficient to support a student during the term of his appointment, and it should never be considered as of the nature of a salary for services rendered to the individuals or firms who have endowed the Fellowship.

4. In all decisions regarding the acceptance of Industrial Fellowships, the educational advantage of the students concerned should be the chief consideration. No investigations should be undertaken under the name of graduate work whose interest is primarily commercial and which do not have a direct relation to fundamental scientific principles.

5. No arrangement should be entered into with any individual or firm in regard to the endowment of a Fellowship by the terms of which it is stipulated that there shall be delay in the publication of results, or any conditions imposed that are not consistent with the requirements in regard to theses that have been accepted for the degree of Doctor of Philosophy.

6. *Voted*, that nothing in the resolutions above stated is to be construed as in opposition to the acceptance by the University of grants by an industry for the investigation of technical problems of that industry; but that such a grant shall not be classed as endowment of a fellowship or fall under the jurisdiction of the Graduate School, unless the investigation is being carried on by a student registered in the Graduate School and may be used by him in partial fulfillment of the requirements for an advanced degree.

RESOLVED, that, in view of the foregoing legislation in regard to Industrial Fellowships, the Board of Trustees be requested to grant to Industrial Fellows who have been duly elected by vote of the Faculty the same financial concessions as are given to other Fellows in the Graduate School.

In accordance with recommendations made by the Dean in previous reports to the President, and on the request of the Faculty, the Board of Trustees, at its meeting of May 1, 1920, established a Joint Council for the Graduate School, to be made up of three representatives of the Board and three representatives of the

Faculty, with the President of the University as chairman. The Board of Trustees named as its representatives on the Council, Trustees Pound, R. B. Williams and R. H. Treman, and the Faculty chose to represent it, the Dean, ex officio, and Professors Merritt and Becker. In appointing its representatives the Faculty adopted the following resolutions in regard to this subject:

1. That the Committee on Conference with the Board of Trustees be discontinued, and that representatives of the Faculty be chosen as members of the Joint Council established by the action of the Board of Trustees at its meeting of May 1, 1920.

2. That the representatives of the Faculty shall consist of the Dean of the Graduate School ex officio and two members of the Faculty to be elected for a term of three years.

3. That at the first election two representatives be chosen for terms of two years and one year, respectively, and that thereafter one representative be regularly elected each year at a meeting of the Faculty to be held before the end of the Second Term, and of which due notice shall be given, the representative thus chosen to assume office immediately after Commencement.

4. It is the understanding of the Faculty of the Graduate school that the purpose of the Joint Council is to bring to the attention of the Board of Trustees and its representatives the fundamental importance of graduate study and research in the life of the University, and to make suggestions from time to time regarding ways in which this side of the University's work may be strengthened and extended. The Faculty understands that it is not intended to confer upon this Council any authority which the Faculty has hitherto exercised; but that the Faculty shall continue to be the ultimate authority regarding all matters of educational policy within the Graduate School.

5. The Faculty shall be kept informed by its representatives of matters under consideration by the Council, and no recommendations likely to affect the place or standing of graduate work in the University shall be made until the Faculty has been given an opportunity to express its opinion upon the matter.

6. That the Secretary of the Faculty be instructed to send a copy of the two foregoing paragraphs to the representatives chosen from year to year, along with the formal notice of their election.

During the year the attention of the Faculty was called to the comparative shrinkage in value of the stipends attaching to Fellowships and Graduate Scholarships through the increased cost of living. Formerly a Fellowship of \$400 or \$500 was sufficient with economy to defray the living expenses of students holding such appointments, and allowed them to devote themselves uninterruptedly to study and research throughout the academic year. It was pointed out that under prevailing conditions it is often impossible for men who are excellently qualified to accept these appointments, because the stipends are no longer adequate for their support; and that when they have done so they have sometimes been obliged to undertake outside work to supplement the income they receive. After consideration of the difficulties of the present situation, the Faculty recommended to the Board of Trustees that the stipends at present attaching to Fellowships and Scholarships be doubled in order to meet the conditions of the present time. This recommendation was referred by the Board of Trustees to the newly established

Joint Council for the Graduate School, which will probably make the question its first subject of consideration.

In view of your retirement from the Presidency at the end of the present academic year, I wish to express on behalf of the Graduate School the deepest gratitude for the interest you have always shown in this side of the work of the University, and to assure you that your great services to the cause of scholarship and research will continue to be held in honor and remembrance among us. The news that comes on the very day of your retirement, of an endowment of half a million dollars for research secured through your efforts, affords renewed and striking evidence of your constant efforts to foster and develop the spirit of investigation in the University as the source from which it derives its life and true being.

Respectfully submitted,

J. E. CREIGHTON,

Dean of the Graduate School.

Statistics of Attendance

In the Graduate School, during the academic year 1919-1920, there were registered 408 students, in addition to 171 registered during the summer of 1919.

	1919-20	1918-19	1917-18	1916-17	1915-16
Number of students registered during the academic year	408	305	279	467	482
Number of students registered during the Summer of 1919					
1. Summer Session	95	35	33	55	45
2. Third Term (4th)	67	42	68	128	85
3. Personal Direction	9	13	22	30	17
Total in Summer	171	90	123	213	147

Classified according to the degrees for which they were candidates:

	Academic Year	Summer
Honorary Fellow	1	0
Doctors of Philosophy	183	55
Masters of Arts	64	44
Masters of Science	50	23
Masters of Science in Agriculture	37	19
Masters in Forestry	5	2
Masters in Landscape Design	3	1
Masters of Architecture	2	0
Masters of Civil Engineering	9	3
Masters of Mechanical Engineering	7	2
Not Candidates for a degree	41	20
Unclassified	6	2
Total	408	171

Classified according to the group in which the major subject falls:

	1919-20	1918-19	1917-18	1916-17	1915-16
Group A, Languages and Literatures.....	37	24	35	39	52
Group B, History, Philosophy and Political Science.....	49	37	35	61	62
Group C, Physical Sciences.....	67	52	40	77	75
Group D, Biological Sciences.....	216	150	149	259	243
Group E, Engineering, Architecture.....	31	34	17	26	50
Unclassified.....	7	6	7	5	..
Honorary Fellow.....	1	2	1	..	..

Among the students registered in the Graduate School during the year 1919-1920, there were graduates of one hundred and twenty-nine institutions, distributed as follows:

Albion College.....	1	Massachusetts Institute of Tech.....	1
Alfred University.....	1	McGill University.....	1
Allegheny College.....	2	Miami University.....	2
Amherst College.....	2	Michigan State Normal College.....	1
Arkansas University.....	1	Middlebury College.....	1
Bates College.....	1	Missouri State University.....	1
Bethany College.....	1	Mount Holyoke College.....	7
Bluffton College.....	1	New Hampshire State College.....	2
Brazil Espanola Superior Agrícola.....	5	New Mexico A. and M. College.....	2
Bridgewater College.....	1	Niagara University.....	1
Bucknell University.....	2	North Carolina A. and M. College.....	3
Chicago Veterinary College.....	1	North Carolina Negro Agr. and Tech.....	1
Clark University.....	3	Northwestern University.....	3
Clemson College.....	2	Norwegian School of Agr.....	2
Colgate University.....	1	Oberlin College.....	4
Colorado Agricultural College.....	1	Ohio State University.....	2
Columbia University.....	1	Ohio Wesleyan University.....	1
Connecticut College for Women.....	1	Oklahoma A. and M. College.....	1
Cornell University.....	167	Oklahoma University.....	1
Dartmouth College.....	2	Ontario Agricultural College.....	2
Davidson College.....	1	Oregon State Agricultural College.....	1
Denison University.....	1	Pekin Government University.....	4
Denver University.....	1	Pennsylvania State College.....	6
D'Youville College.....	1	Pomona College.....	4
Elmira College.....	2	Princeton University.....	2
Emory and Henry College.....	2	Purdue University.....	2
Government Institute of Technology.....	5	Queen's University.....	4
Grinnell College.....	1	Richmond College.....	1
Grove City College.....	1	Rio Grande de Brazil.....	1
Harvard University.....	1	Robert College.....	2
Hobart College.....	1	Roanoke College.....	1
Hong Kong University.....	1	Royal High Agr. College (Jugo-Slavia).....	1
Hunter College.....	1	Sappora Imperial Agr. College.....	1
Huron College.....	1	Smith College.....	1
Iowa State Teacher's College.....	1	Sophie Newcomb College (Tulane).....	1
Iowa State University.....	3	Stetson, John B., University.....	1
Kansas State Agricultural College.....	2	Tangshan Engineering College.....	1
Kentucky State University.....	1	Tarkio College.....	2
Kyoto Imperial University.....	1	Texas A. and M. College.....	1
Lafayette College.....	2	Tientsin Naval College.....	1
Laval University.....	5	Tohoku Imperial University.....	1
Leland Stanford University.....	1	Trinity College (Hartford, Conn.).....	1
Maryland State College.....	1		
Massachusetts Agricultural College.....	3		

University of Amsterdam.....	1	University of Tokyo.....	1
University of California.....	1	University of Toronto.....	5
University of Colorado.....	2	University of Virginia.....	1
University of Illinois.....	5	University of Washington.....	4
University of Indiana.....	6	University of West Virginia.....	3
University of Kansas.....	4	University of Wisconsin.....	2
University of Michigan.....	2	University of Zurich.....	1
University of Minnesota.....	2	Vassar College.....	1
University of Missouri.....	2	Virginia Polytechnic Institute....	1
University of Montana.....	1	Wabash College.....	1
University of Nanking.....	3	Washington and Jefferson College	1
University of Nebraska.....	3	Washington State Agr. College....	1
University of North Carolina.....	1	Washington University (St. Louis)	1
University of Oregon.....	2	Wasoda University.....	1
University of Pennsylvania.....	2	Wellesley College.....	6
University of the Philippines.....	2	Wesleyan University.....	2
University of Pittsburgh.....	1	William and Mary College.....	1
University of Rochester.....	3	Williams College.....	1
University of Saskatchewan.....	1	Winthrop College.....	1
University of South Africa.....	2	Wofford College.....	2
University of Sydney.....	1	Yale University.....	6
University of Texas.....	2		

APPENDIX III

REPORT OF THE DEAN OF THE COLLEGE OF ARTS AND SCIENCES

To the President of the University:

SIR: As Dean of the College of Arts and Sciences I have the honor to submit to you the following report for the year 1919-1920.

In my report of last year reference was made to the legislation of the Faculty which aimed at the improvement of our advisory system, with a view to making the work of freshmen and sophomores more planful and thorough. You have always emphasized the need of high standards of scholarship in the College, and it was due to your efforts that by the joint action of the Board of Trustees and the Faculty, the Administrative Board in Charge of Freshmen and Sophomores was established in 1907, with full power to supervise their work and to provide means for making it effective. Owing to a general unwillingness on the part of the Faculty to encroach upon the freedom of election either by making advice mandatory or by prescribing studies, the system did not lead to any considerable improvement. Beyond requiring every underclassman to consult with a member of the Faculty concerning his program, and limiting the freshman in his choice to a given list of subjects, the Board accomplished little. Nor did its successor, the Committee on Advice to Underclassmen, which came into being in 1916, meet with a greater measure of success. It is not surprising that the results were somewhat less than satisfactory. We created bodies to supervise and direct and yet were reluctant to

interfere with entire freedom of choice, fearing lest restraint of any kind might hamper the growth of individuality and stifle the love of learning. Confronted with the impossible task of harmonizing two contradictory principles, our agencies were condemned to inactivity from the start. The "full power" of the Administrative Board stopped at the threshold of the Faculty which had delegated it but was fearful of its exercise; and the authority of the Committee on Advice to Underclassmen "to consider and recommend measures" culminated in a resolution to legislate itself out of existence, to be replaced by a body vested with larger prerogatives than had been enjoyed by itself.

In consequence, a new Advisory Board for Underclassmen was formed last year and empowered to select advisers for freshmen and sophomores, to require of the student a plan in the choice of his studies, and to administer the cases of scholastic deficiency arising in these classes. The Board has gone about its business intelligently and conscientiously; and real progress is being made in the direction of sounder scholarship under its efficient leadership. It wisely decided to give especial attention to the freshman class this year and to study the sophomore problem in connection with this same group next fall. Time and experience will be needed to find the right way to our goal, but I am persuaded that a good beginning has been made. Besides improving the system of giving advice, the Board has sought to keep in touch with the work of the freshmen, receiving mid-term reports from their teachers and giving such help and counsel as the particular case may call for. Some freshmen were found to be inadequately prepared for university tasks; some lacked the necessary maturity of mind, and some the desired physical stamina. It was also found that a considerable number had slighted their academic duties under the stress and strain of fraternity rushing or because of the heavy demands of extra-curricular activities. It is unfortunate that freshmen should be encouraged to engage immoderately in these pursuits at the outset of their career when undivided interest and strict application are so essential to their scholastic success. Some institutions have taken measures to remedy this evil, and it may be asked whether the Faculty ought not to consider the advisability of protecting the inexperienced freshman—especially in the first term—against the temptation to regard study as a mere unpleasant incident of his academic life. The fraternities could render great service if they would look upon themselves not as mere social centers but as co-operating members of the academic polity, helping to realize what a university essentially stands for. At present their loyalty is only partial and incomplete; they must develop a loyalty to the spiritual purposes which it is the chief concern of an institution of learning to promote and make a living force in the world. A real university cannot do otherwise than emphasize scholastic achievement as its primary aim; we cannot forget that this is what universities have been established for, and that they prove unfaithful to their trust when they worship idols. The notion ought not to gain ground that only a few peculiar and freakish persons are expected to take the academic tasks seriously while the normal and healthy-minded are here chiefly to shine in the extra-curricular activities. I do not believe that the expensive scholastic apparatus of the modern university is needed for the realization of such an ideal, or that the American people will go on paying for it, or professors be willing to become a part of it, if the ideal should become a reality.

In previous reports attention has been called to the need of improving our upperclass group requirement. The purpose of this is to lead juniors and seniors to specialize in some field of study, but it often fails of its intention because of the wide range of many of the groups, the lack of co-ordination within a particular group, and the possibility of taking rather elementary subjects in the group. In accordance with recent legislation, the range of some of the groups has been narrowed by division into two or more parts; in place of the one large group of Modern Languages, for example, we now have the separate groups of French, German, etc. Many departments have also designated certain foundation courses which shall not be counted as satisfying the upperclass group requirement; and some have restricted the amount of credit to be given to upperclassmen who take such courses after the sophomore year. All this represents a slight step forward. It is to be hoped that the different departments may be able to arrange such sequences of courses as will lead to more than a mere smattering of knowledge. At present the upperclassman is required to devote twenty out of sixty hours of his last two years to some field which may be extensive, yet he may spend the remaining forty hours in roaming over the whole territory of human knowledge, picking from term to term a combination of unrelated and elementary subjects and so losing the opportunity of intensive study and training in a specialized field. Students coming to us from other colleges on the Campus or from the outside, may receive our degree after one year's occupation with studies of this kind, getting very little benefit from their residence in the College. We are still suffering from the evils of irrational freedom of election, from the false conception of liberty to do as one pleases, without knowing what is best. This doctrine, which has been more or less discredited in politics and economics, is leading a lusty life in education. One of the chief functions of our College is to train the student in the use of the sources and the methods of knowledge, in the art of independent investigation, so that he may learn how to find knowledge for himself. To this end he should give a large part of his upperclass years to the intensive study of subjects of an advanced character, for which the foundations have been laid and which form a logical sequence. We cannot realize our purpose unless each department carefully studies the problem and works out a program to guide the particular upperclass adviser in his efforts to help the student. The weakest part of our educational structure is to be found in our upperclass years; it can be strengthened only by the action of the separate departments; and this is a work to which they ought to give their immediate and best care.

The Faculty has passed legislation affecting specified technical courses required of the members of the Reserve Officers Training Corps in the Department of Military Science and Tactics, which may be counted as credit in the thirty hours of professional work allowed to our students. It has also placed certain courses given by the Department of Music in the same category. The rule of the College requiring the satisfactory completion of ninety hours of work in the humanities and the sciences, and permitting the student to elect, in addition to these, as many professional hours as he can profitably carry, makes it possible for him to lay such foundations for vocational training as the University at large may afford. By taking an average of eighteen hours a term throughout the four years of residence, the student could accumulate a credit of fifty-four professional hours. This should be remembered in considering the question of vocational training, so far as

it affects our College. It is not necessary, in order to provide opportunity for preparation in the newer vocations, to transform the College into a vocational school and to destroy what little meaning is still left in the old A.B. degree, which many are still eager to have while repudiating the type of education for which it stood and which made it honorable. If new vocational courses or schools are to be established at Cornell, the policy adopted by the general University Faculty regarding the proposed graduate School of Commerce should be followed, which will enable seniors of our College to enter that school and to receive our A.B. degree after the satisfactory completion of one year's work there, and the M.A. degree after an additional year of graduate work. Cornell University cannot and ought not to attempt everything that any other university in the land may already be doing, but when it decides to enter new fields of practical activity, its aim should be to educate men and women of vision and leading; and experience seems to indicate that for the average human being the path to successful achievement in the liberal professions runs through the colleges of arts and sciences. At any rate, it is safe to predict that the great professional schools of the future will be graduate schools.

During the last two years the Faculty, the Conference Committee, and the Dean have called attention to the overcrowding in many of the freshman and sophomore classes and to the dearth of instructors for section work. The situation has not improved, and it will be difficult to remedy it, not only on account of inadequate financial support but also because of the scarcity of experienced teachers. We cannot conceal from ourselves the fact that there is room for betterment in the quality of our instruction. In this respect we are not alone; like numerous other big institutions we have more students than we can properly care for. It would, however, be unfortunate if we should grow used to this condition of affairs and accept it as inevitable. The most obvious solution of our problem would be to limit the number of our students. We could do this by simply refusing to accept more than we can satisfactorily handle, or by raising our standards, or by both methods. The University has already decided to restrict the number of women to the extent of our housing facilities; would it not be wise to keep in mind the *intellectual* housing facilities, and to cut the attendance down to our ability to offer good instruction? The American universities have in recent years been too much inclined to measure their progress by quantitative standards; they have pointed with pride to the great size of their "plants" and to the vast army of their student body. Is it not time again to think of quality? There is need of trained minds to train minds, and we have not masters enough to go around. The disproportionate increase in the number of our assistants and instructors to the number of professors tells the tale; and as the mass of students grows, our difficulties multiply. The departments are finding it harder and harder, as the days go on, to provide even the limited supply of assistants and instructors allowed by the budget. The more students we get, the more professors we ought to have, but failing these, the more teachers not yet thoroughly trained we shall have to accept, if we can afford them. If this process goes on, we shall be compelled to continue the endowment campaign indefinitely even to maintain the undesirable *status quo*. We can stop it by halting the procession of youth which is storming our doors.

The superficial observer may suggest that we might find relief by decreasing the number of our courses; that by concentrating upon fewer subjects within a department we could obtain the teachers needed to assist in the instruction of the overcrowded classes of that department. This would be feasible only in case the classes to be abandoned were small. There would be no gain if a professor gave up his own large class in order to assist in teaching another large class, for the abandoned group would have to find a refuge somewhere else. The smaller classes, on the other hand, are apt to be of a somewhat advanced character, and these cannot be disbanded without injury to the College, since juniors and seniors must be provided for: in a university there must be adequate opportunity for meeting the needs of such learners. It is true, about one-fifth of the courses offered are of the graduate type—not an excessive number for a modern university to offer—and these are the ones which persons who apply purely quantitative standards might wish to curtail. But that would mean the abolition of the Graduate School and the decline of effective teaching in the College itself. Cornell University cannot refuse to do its share in recruiting the profession of scholars and in training investigators for the nation. Noblesse oblige. Nothing, of course, is impossible. We could turn the College into a mere preparatory school for the other colleges on the Campus and cease to be a university. No one, however, will endorse a policy that would lead to such a result.

In 1914, our Faculty studied the question of the reduction of courses and found that the total number of courses offered in our College was much smaller than in five other institutions (Chicago, Harvard, Ohio, Pennsylvania and Wisconsin) which had been selected for comparison with Cornell because they were believed to represent the prevailing conditions in the large institutions of the East and West. The difference was seen to be particularly striking in the case of graduate work. In the report of the committee to which this whole matter had been referred, the following points were "deemed obvious":

(1) As a minimum there must be *one* beginning course in each language, science, or other fundamental subject, and also in each subdivision of those subjects in which advanced work is offered. This will account for the existence of between 200 and 250 of our undergraduate courses (of which there were 376 announced in 1914).

(2) Every teacher above the rank of instructor (and the same is true of many instructors) should be expected as a matter of principle to offer at least one advanced course over and above his routine work, and there are numerous cases where the demands upon him compel him to offer several such courses. It is the opportunity to do some advanced work which renders a university position attractive to men of ability, and the general effect upon our elementary teaching is undoubtedly good. Moreover, since almost without exception the members of the Arts faculty, from the heads of departments down, are engaged in elementary teaching, to which together with administrative work, most of them give the greater part of their time, the maintenance of such advanced courses as are offered can scarcely be regarded as involving any considerable increase in our teaching force.

(3) In view of the larger programs offered in other institutions of the first rank in this country, the committee believes it inadvisable to attempt to reduce materially the number of our courses. In particular, any considerable diminution in the amount and variety of the advanced work offered would, in its opinion, tend to divert to other institutions the more ambitious and desirable elements in the student body and to lower the general quality of our teaching.

I believe that the judgments expressed in this report are still cogent today and that it would be a distinct lowering of our educational standards and a serious impairment of our usefulness to make "any considerable diminution in the amount and variety of the advanced work offered."

If there is any cutting to be done, a beginning ought to be made with the elementary courses which duplicate the work of the secondary schools; but such action would not lead to any considerable decrease in courses, because the underclassmen now taking such courses would help to swell the enrollment of the more advanced classes in these subjects. Only in case they entered other colleges, would there be any improvement in our situation. Something might be gained by limiting the number of hours a student may take during a term. At present the average number of hours taken is eighteen. It is easy to see that it would require fewer teachers to train 1800 students taking fifteen hours a week than would be needed to train 1800 taking eighteen hours a week.

In this entire discussion we should never lose sight of the fact that the College is engaged in giving instruction in fundamental subjects to the underclassmen of nearly all the colleges on the Campus, and that this duty forms a very large part of its work. Its staff would be much smaller and its budget less formidable if this burden were placed upon these colleges themselves. The expenditure demanded for the performance of this function should not be charged against us as a College, nor should we be held responsible for the multiplication of courses made necessary by our double function. It must also be remembered that departments of other colleges list in our Announcement electives that may be taken by our students, and thus increase the number of courses credited to our account. When a member of another faculty is assigned to our College by the Board of Trustees, he may arrange an elaborate scheme of courses open to our students which very few of them actually select. Other such courses may be taken by our students in preparation for professional study, for example, the so-called pre-medical courses.

What I am trying to point out here is that a college cannot undertake to do many different things, that is, provide a general education, teach students of other colleges and prepare them for other colleges, without having a large staff and listing a large array of courses in its catalogue, and without costing a great deal of money. With our present manifold and variegated functions we represent a peculiar, hybrid type of college, unlike the type with which persons not familiar with the facts often seek to compare us. We are a preparatory school for the professions, a liberal college, and a graduate institution. One College cannot be so many things without being peculiar and expensive. We are doing a big work here, and we are doing it as well as we can under great handicaps; such handicaps as only those who have a thorough knowledge of the facts can appreciate. We should look them squarely in the face before proposing remedies. Even the question of limiting the enrollment of our College, simple and feasible as it appears, is bound up with that of the policy of the other colleges on the Campus in this regard. If they should not set a limit and we did, our difficulties would continue unless they decided to do for themselves the elementary work which we are now doing for them. Otherwise the increasing burden imposed upon us by the continued growth of our professional schools would compel the College of Arts and Sciences to deny admittance to an increasing number of students seeking the kind of education it offers, and eventually to abandon its real function in the university life. That would be a calamity to Cornell.

The total registration of the College of Arts and Sciences for the year 1919-1920 is 1812, an increase of 342 over that of last year. Of those enrolled, 1505 are candidates for the degree A.B.; 288 candidates for the degree B.Chem.; and 19 are special students. The number of men is 1190; the number of women, 622.

The following table shows the enrollment for the last ten years:

Year	Men	Women	Total
1910-11	755	262	1017
1911-12	787	244	1031
1912-13	879	233	1112
1913-14	896	236	1132
1914-15	1001	293	1294
1915-16	1080	345	1424
1916-17	1097	386	1483
1917-18	835	427	1262
1918-19	980	490	1470
1919-20	1190	622	1812

In conclusion, I wish to commend the standing committees of the Faculty, the Committee on Academic Records, the Committee on Educational Policy, and the Advisory Board for Underclassmen for their patient and efficient performance of duty during the year. I desire also to express my full appreciation of the work of the Acting Secretary of the College, Professor Donald English, who, in the absence of Professor C. L. Durham on the business of the Endowment Committee, has rendered able and loyal service in a responsible and difficult office. To all these colleagues who have labored so faithfully and unselfishly for the best interests of the College the Faculty owes sincere thanks.

In bringing this my last report to you to a close, Mr. President, I cannot refrain from expressing my deep appreciation of the honor of having been associated with you in the service of the University which you have helped to upbuild and to which a large part of your life has been devoted. My duties have been made easy by your wise and unwavering interest in the College and by your constant readiness to aid us all in every effort to promote its welfare. Your courtesy and kindness to the members of the Faculty, your sense of fairness, your respect for the dignity of our profession and regard for the worth of the individual personality, and your ardent championship of sound ideals of education have won our admiration and have helped to create an academic atmosphere in which it has been a privilege and a pleasure to live. We are happy and proud to have worked under your leadership, and we are hopeful that the spirit which you have breathed into this institution will remain a living force. As you take leave of us we extend to you our warmest wishes for your continued happiness.

Respectfully submitted,

FRANK THILLY,

Dean of the College of Arts and Sciences.

APPENDIX IV

REPORT OF THE DEAN OF THE COLLEGE OF LAW

To the President of the University:

SIR: I beg to submit the annual report of the Dean of the College of Law for the year 1919-1920.

The registration in the College of Law for 1919-1920 was as follows:

Third Year (Seniors)	36
Second Year (Juniors)	56
First Year	79
Total law students.....	171
Seniors in Arts and Sciences taking all the law work of the first year.....	18
Students from other colleges in the University electing some courses in law.....	24
Total receiving instruction in the College of Law.....	213

Of the seventy-nine law students taking the first year law work, sixty-eight were registered in the College in the old four-year course and before the new entrance requirements of two years of general college work became effective in 1919; eleven entered in the fall of 1919, presenting the new entrance qualification of two years of general college work. It is evident that the number of students entering the first-year class in the fall of 1920 will be much reduced inasmuch as those who entered the College of Arts and Sciences in 1919 with the purpose of taking two years of college work preliminary to law will not be eligible for admission to the College of Law until 1921; and even some of these will no doubt continue in the College of Arts and Sciences a third year in order to obtain both the arts and law degrees in six years instead of the law degree alone in five years. Those who are in a position to pursue the six-year course in arts and law should be encouraged to do so. The reasons for acquiring the pre-legal education afforded by a college of liberal arts, or for taking at least two years of arts' work, were stated in my report to you last year and need not be rehearsed here.

The Faculty and the curriculum temporarily abridged during the war were entirely restored in the fall of 1919 to the pre-war basis. Mr. Robert Sproule Stevens, A.B., (Harvard), 1910, LL.B. (Harvard), 1913, who was appointed lecturer in the college for the year 1919-1920 and has given the courses on Torts, Equity, and Associations successfully this year, will continue during the year 1920-1921. Mr. Stevens after graduation was associated with the law firm of Rogers, Locke and Babcock in Buffalo, N. Y., until January, 1915, when he became a member of the firm of Stevens and Reynolds in the same city, remaining in practice with that connection until, in 1917, he entered the Officers' Training Camp at Fort Niagara, where he was commissioned. He remained in military service until the spring of 1919.

Our extremely valuable Law Library now numbers 53,197 volumes. The accessions during the year were 1077 volumes of which 330 were gifts. Despite the reduced appropriation for law books during the past few years due to enforced economy, and notwithstanding the greatly increased cost of books, the shelving capacity of the Library will have reached its limit next year. At that time it will be necessary to provide additional accommodation for accessions. The Law Library has now reached a size where considerable work must be done in re-classifying and re-cataloguing the text-books and in making shelf lists of all of the other books, and it can be done only by the employment of a permanent assistant to the Librarian in addition to the student assistants who serve as desk attendants. During the past year only 210 volumes have been bound or repaired. There is now an accumulation of several hundred volumes that need attention in this respect as soon as the present binding conditions improve and our funds permit. One cannot praise too strongly the resourcefulness and industry of our Librarian, Mr. Willever, who though badly hampered by lack of assistance, pecuniary and personal, has maintained in so high a state of efficiency the Law Library which is the chief working apparatus of the college.

Grateful acknowledgment is made of two special gifts to the college. One is the sum of \$200 presented by an anonymous friend of the college through former Professor Alfred Hayes. While the sum was given primarily to pay the expenses of a delegate from the college to the Meeting of the Association of American Law Schools, the donation may be used in part for other needs, in the discretion of the Dean. The other particular gift is 125 volumes, chiefly upon international law, presented by Mrs. Andrew D. White from the library of our former president.

The *Cornell Law Quarterly* is now concluding its fifth year of uninterrupted success. The editors are gratified that the *Quarterly* is being quoted and cited and has won a place among the recognized law periodicals of the country. A double number issued in June, 1919, in connection with the Semi-Centennial Celebration contains an illustrated historical sketch of the College of Law and gives us in convenient form a permanent record of the work of the college during its first thirty-two years.

In conclusion, it is a very real and personal pleasure to record in this report, at the unanimous request of our Faculty, the following resolution:

"Upon the occasion of the resignation of Jacob Gould Schurman from the Presidency of Cornell University, the Faculty of the College of Law places upon its minutes this grateful appreciation of his devoted service to the College for twenty-eight years. He was inaugurated as President of Cornell in 1892, the year in which Boardman Hall was first occupied. Throughout his administration he has shown the keenest interest in the welfare of the College, and aided by his wise counsel and generous support, the size of the faculty has been doubled, the standards for admission raised from an amount of preparation less than high school graduation to two years of college work, the law library increased from 10,000 to more than 53,000 volumes, the course of instruction lengthened from two to three years, and the quality of the work of the College strengthened and broadened."

Respectfully submitted,

EDWIN H. WOODRUFF,

Dean of the College of Law.

APPENDIX V

REPORT OF THE DEAN OF THE MEDICAL COLLEGE

To the President of the University:

SIR: I have the honor to submit the following report of the Medical College for the academic year 1919-1920.

The year has been chiefly occupied with efforts to rebuild the various departments of the College, which became more or less disorganized during the war, and to meet the new problems which the rapid advances in medical education impose upon institutions engaged in teaching the science of medicine. The number of students applying for admission to the first-year class was larger than ever before, and after seventy-one had been accepted, further registration was suspended. This number, together with the large registration in the Ithaca Division, is greater than can be properly instructed at present, and has precipitated the adoption of a policy of limiting the number to be admitted in the future. This decision will permit selection of those applicants who are best qualified to avail themselves of the resources of the College, and prevent the over-burdening of the staff of instruction with a consequent lowering of teaching efficiency.

A survey of the facilities of the College was made, and after thorough consideration the Faculty recommended that not more than seventy-five students be admitted to the first-year class, including the Ithaca Division, and that no further admissions be made to the second, third and fourth-year classes unless the number falls below sixty. The Council and Board of Trustees have adopted this recommendation, and it will become effective next fall. Since it has become necessary to limit the number of students, and in order that the benefits of the College may be equalized throughout the State and country, it has further been decided to admit to the first-year class, not more than five students from any one college, excepting of course other colleges of this University.

Another important decision has been to admit women to the first-year class in the New York Division. The conditions which have heretofore made it desirable to require woman to attend the Ithaca Division for their first year's work are no longer operative, and they will therefore be admitted hereafter on equal terms with men. This is in harmony with the practice of the leading medical colleges throughout the country.

The increased number of students emphasized the necessity, which has been apparent for several years, for changes in the laboratories of the Departments of Physiology, Bacteriology, and Chemistry. These have therefore been enlarged and provided with adequate equipment for the most effective teaching. This is in accord with the policy of the College to provide, so far as is possible, the very best facilities for instructing the limited number of students which we shall accept.

The Faculty regrets that Professor Elliot has resigned as head of the Department of Dermatology, which chair he has held since the founding of the College. He has always taken a keen interest in the institution, and the Faculty will lose a valued teacher and respected colleague.

Professor Meara, head of the Department of Therapeutics during the past eleven years, has also resigned. He desires to be relieved from the heavy duties of the position, but the College is to be congratulated that he will continue to give

some brief courses to the Senior Class. He is one of the most distinguished clinical teachers of medicine, and has been a constant source of inspiration to his associates and students. His action has been influenced by the conviction that the subject of therapeutics is so intimately concerned with internal medicine that there is no longer reason for continuing a separate department, and he recommends that the work formerly given by the department be assumed by the Department of Medicine. The recommendation has been adopted.

In order that the work of the Faculty may be facilitated and become more effective several committees have been formed. A Committee on Educational Policy, composed of the heads of the major departments, together with three representatives from the specialties, with the Dean as chairman, meets monthly for the purpose of making recommendations to the President and Faculty, and to advise the Dean on matters relating to the educational functions of the College. Committees on the Curriculum, Dispensary, and Library have also been formed.

The library, which has heretofore been located in the Department of Pathology, possesses over 6000 volumes and many reprints, some of which are of considerable value and form the nucleus for a very satisfactory working library. It has not been satisfactorily maintained, as the librarian has been occupied in part with other work; neither has it been sufficiently used by the staff and the students. A gift from a friend of the College makes it possible to employ a full-time librarian next year and to acquire a number of useful accessions.

The staffs of the several departments returned to their duties last fall with renewed energy and enthusiasm and the instruction has been more satisfactory than for several years. Investigation of problems relating to the science of medicine has been renewed, and a great deal of work accomplished which promises well for the future.

Those departments which are concerned with the fundamental sciences appear to be in a particularly healthy condition. They are well organized, the personnel is generally satisfactory and most of the staff have a reasonable amount of time for research, without which no department can be a live teaching unit. The opportunity for investigation is important for another reason, often overlooked, in that it represents a large part of the reward for pursuing an academic vocation. The salaries of all of our staff who give their whole time to the College are inadequate. Every one is loyal to the institution, however, and many have declined larger salaries elsewhere, for it is realized that the College, within its resources, intends to provide time and facilities for research.

The clinical departments have, as heretofore, been hampered by their lack of control of the hospitals upon which they are dependent for opportunities in clinical teaching. This again emphasizes the necessity for very close affiliation between the College and a large modern hospital, without which the College will be unable to make satisfactory progress. The large funds necessary for the establishment of a medical institution along such lines, do not appear to be available at present but the need is so great and the results so certain, that it cannot be doubted they will be forthcoming when the demands of modern medical education are properly placed before the supporting public.

The most important development in the Department of Medicine was the establishment of the clinic in Bellevue Hospital (Second Division), chiefly manned by whole-time workers under the direction of Professor DuBois. Many difficulties have been encountered, but they were mostly anticipated and I regard the

progress which has been made as highly satisfactory. Several years will be required, however, to determine whether this is the best plan which can be devised for conducting a teaching clinic.

The Department of Pediatrics has been reorganized under the direction of Professor Schloss, and promises to become one of the strongest in the College. Professor Schloss is Director of the Pediatric Service in the Nursery and Child's Hospital and, through the hearty co-operation of the Board of Managers, has been able to effect arrangements whereby he may carry on a large part of the instruction in pediatrics at this hospital. The College is fortunate in thus securing admirable facilities which it has heretofore lacked. Our affiliation with the New York Hospital continues to be most satisfactory, and the Board of Governors is always ready to meet the needs of medical education. About one-half of our teaching in medicine and surgery is given there, and the only defect in the arrangement is the distance between the two institutions. A great deal of time is lost in going back and forth, and it is difficult to maintain the close personal relations between the College and hospital staffs so essential for effective work. This is, however, reduced to a minimum by the efforts of Professors Gibson, Conner, and Elser, who have done so much to establish and maintain the happy relations which exist between the two institutions. This serves to emphasize further the necessity for the closest possible physical relations between the College and the hospitals in which it gives instruction.

The very important work being done at the Memorial Hospital, covering the care, treatment and research in cancer and allied diseases, continues to make satisfactory progress. The College is responsible for all the medical and surgical activities in the Hospital and in order to properly carry these on close relations have been established with the Board of Managers. The Dean has been elected to the Board and the President has appointed a Committee from the Medical College Council which is charged with the duty of bringing the Council into closer touch with the problems of the Hospital.

A review of the history of the College during its twenty-two years of existence reveals that it has taken an important part in the development of medical education in this country, and that its progress has been very satisfactory. Yet, as you fully set forth in your report for 1917-1918, a crisis has come in medical education and must be met by Cornell. Educational work and scientific investigations cannot be carried to a higher plane of efficiency without radical changes, and these must be effected in the near future if the College is to maintain its position. The foremost needs are an effective alliance with a modern hospital, both institutions to be on a common site, and with funds adequate to carry on the larger work as well as to provide for certain extensions, particularly in the field of preventive medicine.

In concluding this report I desire to express an appreciation of your efforts in the upbuilding of the Medical College. It is the unanimous feeling of the Faculty that your ever-helpful guidance and masterly acquaintance with the needs of medical education have been the greatest single factor in the success and distinction which the College has achieved. The Faculty profoundly regrets the severance of your official relations with the College, and it is hoped that your advice may continue to be available in times of need.

Respectfully submitted,
WALTER L. NILES,
Dean of the Medical College.

APPENDIX VI

REPORT OF THE SECRETARY OF THE ITHACA DIVISION OF THE
MEDICAL COLLEGE

To the President of the University:

SIR: I have the honor to submit herewith a brief report on some of the aspects of the work of the Ithaca Division of the Medical College for the year 1919-1920.

The work of the year has progressed favorably and smoothly without any marked change in curriculum or procedure but with that gradual and progressive improvement in the various departments incident to normal growth.

The effects of the S. A. T. C. have nearly disappeared and most of the instructors who left to enter the army have returned.

FACULTY

The departments furnishing instruction in the Medical College at Ithaca are Anatomy, Histology and Embryology, Physiology including Biochemistry, and Organic Chemistry. These departments are small. Each has but one full professor. These are the permanent members of the staff. In the Department of Physiology there is an assistant professor in charge of biochemistry. The other teachers are instructors and assistants. These latter remain in the department but a short time. The result is that the heads of the departments must personally see to all the details of the administration and in addition must spend a considerable amount of time in training new assistants. Every good teacher welcomes the opportunity to guide the young men who are planning to devote themselves to this field of work, but when this time-consuming task is added to administrative duties, the elementary teaching of Arts, of medical students, and the graduate instruction, the amount of time and energy remaining for his own research and study is slight. I have pointed out repeatedly the need for more assistant professors who as semi-permanent members of the staff shall share the above duties with the head of the department and relieve him to some extent of the smaller details. He can then devote himself with more enthusiasm and energy to teaching and research, but especially to the better training of more teachers in his subject.

The need of trained teachers of subjects taught in the first years of the medical course is greater today than ever before. This need is due not only to the lack of adequate salaries for the teachers in the medical colleges, which I have been emphasizing for over ten years, but it is also due to the fact that men cannot be found who are willing to spend the time necessary to obtain an adequate training. Something must be done to attract men of first-class ability to the teaching profession. Salaries large enough so that there shall not be constant worry and distraction because of financial matters will be a material help. In addition to this there must be, outside of the routine teaching and administrative duties, sufficient time for research and study to make the teaching career an attraction to real scholars. The right type of teachers will not be attracted by salaries beyond sufficient upon

which to live and provide for their families, but by the love of learning and the opportunities for study and research.

The Ithaca Division of the College has, I think, done its share in the training of young men and women for the teaching profession and provision must be made so that in addition to instruction of students this important work can be continued.

STUDENTS

A gradual increase in the number of medical students has been noted yearly for several years, as shown in the following table:

1912-13	9 students
1913-14	14 "
1914-15	23 "
1915-16	25 "
1916-17	28 "
1917-18	30 "
1918-19	31 "
1919-20	37 "

Of the 37 students registered in the Medical College at Ithaca this year, 20 were men and 17 women; 12 entered from outside colleges and 25 from the College of Arts and Sciences of Cornell University. Of the 20 men, 5 were college graduates and 15 were seniors in the College of Arts and Sciences. Of the 17 women, 11 were college graduates and 6 were seniors in the College of Arts and Sciences.

In addition to the medical students, the various departments of the Medical College have given instruction to considerable numbers of students from other colleges of the University, as noted under the report from each department.

LIMITATION OF NUMBER OF STUDENTS

There was this year a greater proportionate increase in the number of medical students than in any year since 1913-1914. A similar large increase in number in the New York Division of the College precipitated a crisis and forced an immediate decision to limit the number of students. Since it was found that only about 60 students could be properly cared for in the last three years of the course, it was decided, after conference between committees from the Ithaca and New York Divisions of the College, to limit the number received in the first-year class to 75; of whom about 30 would be taken at Ithaca and 45 in New York. It was also decided to limit the number to be received from any other college than Cornell to five students, except under unusual circumstances.

As Cornell is equipped and prepared to give the highest quality of medical instruction, in limiting the number of students, it becomes increasingly important that only the best of the applicants should be selected. To this end, more detailed records of the academic work are to be required and direct information as to the special fitness of the candidates is to be requested from the instructors with whom they have taken the most of their pre-medical scientific work. Applications are to be received up to July 1 and only under exceptional circumstances after that. By July 10, it is hoped to notify all applicants, so that those who cannot be accepted may have ample time to apply elsewhere.

There can be no question of the wisdom of limiting the size of a class to the ability of a school to give adequate instruction. It is important, however, that the limitations in the first-class schools should not be so great that numbers of good students are forced to obtain their medical training in inferior institutions. From the reports of the Council on Medical Education of the American Medical Association, it would seem that the limitations have not yet reached the point where it is necessary for students to resort to any but the schools classified as A Class by the Association.

The need in America today is for increasing numbers of highly-trained medical practitioners. Cornell with her equipment and facilities has a duty to perform in supplying this need. We must first pick those best qualified to profit by the opportunities and then see to it that the quality of the instruction offered is of the best. It is extremely difficult to determine beforehand a student's fitness for medical study. In the medical profession perhaps more than in any other, there are factors other than scholastic ability that play an important role. To select, therefore, students who combine with scholastic ability these other qualities that are so essential must be our aim. And it must not be forgotten that the field is not limited to practice alone; ability for teaching and research are of the highest importance.

Whether or not by limiting the first-year class to a relatively small number, we shall be able to choose the best remains to be seen. There are some who feel that it would be an aid in picking those best qualified for a medical career to admit 90 or 100 students to the first-year class while still limiting the subsequent classes to 60 students; it being understood that only 60 of the best qualified first-year students would be advanced to the second year. During the first year of the medical course the Faculty would have an opportunity to judge of a student's fitness for a medical career. The Ithaca Division could, with but slight additions to the present equipment and staff, give adequate instruction to 40 or 50 students.

ADMISSION OF STUDENTS WITHOUT THE ARTS DEGREE

The Cornell University Medical College has admitted three classes of students, (1) graduates, (2) seniors in approved colleges, (3) persons who give evidence of equivalent training.

Only seniors and graduates have been admitted to the Ithaca Division and but one student of the other class in New York City. The necessity for limitation of numbers has raised the question as to whether it might not be desirable to discontinue the admission of seniors and in the future admit to the Medical College only graduates of approved colleges.

On comparing the standings of the students who were admitted as seniors with those of the students who had finished their college course before admission, it was found that on the whole the records made by the seniors were fully as satisfactory as those made by the graduates.

It was found also that the majority of the seniors were students in the College of Arts and Sciences of Cornell University, there having been 20 such students in 1918-1919 and 21 in 1919-1920, while there were but five students in 1918-1919 and four students in 1919-1920 who were already graduates of Cornell University, and there were six students in 1918-1919 and 12 in 1919-1920 who were graduates

from institutions other than Cornell. The senior students from Cornell have proved to be a most desirable class and are welcome additions to the Medical College.

It is no doubt true that some of the seniors are attracted to the College of Arts and Sciences because of the possibility of combining their Arts and Medical work and thus completing the combined course in seven rather than eight years. In most cases this shortening of the course by one year is very desirable.

The majority of the medical colleges of the country require only two years of college work for admission. The Cornell Faculty believes that this is too short a time and that three years of college work are the least amount of time in which a student can adequately prepare for the medical course.

The age at which medical students complete their course and hospital and begin their life work has been steadily increasing for some time. It is clear that the medical course cannot be shortened and it does not seem wise for us to decrease the Arts training to less than three years. If students then are to start their medical practice earlier the solution must be found in a school system which will make it possible for a student to enter college at a younger age.

While the Faculty has limited the number of students to not more than five from any one outside college, students from the other colleges of Cornell University who fulfill the requirements, are especially welcome, since they come from various parts of the country and bring to the Medical College in New York City the spirit and traditions of Cornell University thus helping to cement more firmly the Medical College in New York City to the University at Ithaca. These students are the majority of them seniors and some of them at least would not come to or continue in Cornell if the combined seven-year privilege were abolished. As the Medical College is an integral part of the University, everything which helps to bridge the geographic separation is to be encouraged.

After a careful consideration of the above and other points by a committee composed of members of both the New York and Ithaca Faculties, it was decided to continue accepting seniors.

CHANGES IN THE ENTRANCE REQUIREMENTS

No especial changes have been made in the requirements for admission for some years. To bring our requirements in Chemistry into conformity with the recommendations of the Association of American Medical Colleges, the Council on Medical Education of the American Medical Association, and the present requirements of the Education Department in this state, the Organic Chemistry which has heretofore been given in the first year is now required for admission. This will be an addition of at least thirty-six hours of lecture or recitation and eighty actual hours of laboratory work. The time formerly devoted to Organic Chemistry in the medical course will be given to those special phases of organic and physical chemistry most important for the subsequent work of the medical student. This will bridge the gap between organic chemistry and the biochemistry of the medical course.

ADMISSION OF WOMEN TO THE FIRST YEAR IN NEW YORK

Women have heretofore been required to take the first year of their medical work at Ithaca. The question of their admission to the first-year class in New

York City has been before the Faculty repeatedly for consideration. The Ithaca Faculty indicated its willingness some years ago to concur in any action the New York Faculty desired to take in this matter, and this year the New York Faculty voted to admit women to the first-year class in New York City.

CO-ORDINATION OF WORK IN ITHACA AND NEW YORK CITY

In order that the work of the two divisions of the College should be properly correlated, the Secretary of the Ithaca Division of the Medical College, in addition to the President, attends regularly the meetings of the Faculty of the Medical College in New York City. In addition to this, Dean Niles has made one visit to Ithaca this year to confer with the members of the Faculty here and the Professor of Chemistry, Dr. Stanley Benedict, also came to the University for a conference in regard to the courses in chemistry. The Professor of Physiology, Dr. Sutherland Simpson, and the Professor of Histology and Embryology, Dr. Benjamin F. Kingsbury, made one trip to New York City to attend a committee meeting there and to be present at the meeting of the Faculty. These conferences between members of the two Faculties are mutually helpful both in promoting closer union of the two divisions of the College and in helping in a better co-ordination of the teaching work. More frequent conferences of this kind are desirable.

ANATOMY

The Department of Anatomy has consisted of one professor, one half-time instructor for neurology, three assistants, and a half-time assistant. The laboratory was open during the first term from 8 A. M. to 5 P. M. every week day except Saturday when it closed at 1 P. M. In addition to the 37 medical students, instruction in anatomical methods was given to 43 Arts students. During the first term a lecture demonstration course was given to Arts and Agricultural students on elementary human anatomy.

The work on the anatomy of the nervous system was given most admirably under the direction of Instructor Stewart who also had charge of the work on the histology and embryology of the nervous system. A part of the neurological collection assembled by Emeritus Professor Burt G. Wilder was transferred from the Department of Zoology to the Department of Anatomy. It is planned that the remainder of the collection be transferred in the near future, as authorized by the trustees. It is desirable that this collection should be kept together, and should be properly cared for and extensively used. It seemed probable that this would be accomplished best in Stimson Hall where courses are now given in the anatomy, in the histology, in the embryology, and in the physiology of the nervous system. Instructor Stewart is leaving at the end of this term to continue his medical studies in Paris under one of the fellowships recently established for American students in France. It is desirable that as soon as possible some other member of the staff of the Medical College should be devoting much of his time to neurology, and ultimately there should be a Professor of Neurology, as there is in a number of other first-class medical colleges.

The instructor and assistants have been most efficient and industrious and have given to the work of instruction far more time than was required of them. They have rendered a valuable service to the Department.

Administrative duties have prevented the head of the Department from much actual accomplishment in the line of research. There have been four graduate students in the Department this year. The Professor of Anatomy has spent much time in revising the dissecting directions which are used by the medical students.

HISTOLOGY AND EMBRYOLOGY

The Department of Histology and Embryology consists of one professor, one instructor for Veterinary students, one half-time instructor for neurology, two assistants, and three student assistants. Professor Kingsbury speaks very highly of all the instructors and assistants in the Department, who have proved most satisfactory and have been very helpful to the students.

In addition to medical students, instruction was given to 136 other students in 246 registrations. Ten of the students were in the Graduate School. There were 28 more students taking instruction in the Department this year than last, and in addition a new course, Embryology for Veterinary seniors, was given this year for the first time. Otherwise the same courses were given this year as last. The Department lacks certain advanced courses which are desirable but cannot be given with the present teaching force.

Investigation is very active in the Department under the stimulating influence of Dr. Kingsbury. Several pieces of research are under way and three important papers have been published during the year. Among the most important needs of the Department are higher salaried members of the staff who would be better trained and more permanent and could therefore do higher grade work in research as well as in teaching. Permanent technical assistants are also essential for higher efficiency in teaching and research. Adequate housing of animals for departmental use and for embryological work is likewise important.

Emeritus Professor S. H. Gage has again this year returned to the retired list. After a year and a half of teaching to help out in our emergency during the war, he has taken up his research again with renewed zeal. He has already made some important discoveries in connection with certain small bodies that are found in the blood and have been known by a variety of names. From their origin, as proved by him, and from their size he has named them chylomicrons. His presence, early and late, in the ample laboratory in Stimson Hall which has been assigned to him, has been a stimulus and an inspiration to the others in the building.

PHYSIOLOGY AND BIOCHEMISTRY

Physiology

The Department consists of one professor, one assistant professor for biochemistry, two instructors and one assistant for physiology, and one instructor for biochemistry.

Professor Simpson reports a successful year with conditions greatly improved as compared with last year. He commends the conspicuous loyalty of the members of the staff to the interests of the Department and the College. He calls particular attention to the development of the practical work in haematology and the personal instruction given the student in the latest methods of examination of the blood, the circulation, and the heart.

By the addition of several pieces of apparatus, notably a fourth large Brodie kymograph, the laboratory work has been considerably extended.

Besides the medical students, instruction in elementary physiology was given to 424 students from other colleges. These were mostly Arts and Agricultural students. This course is very important and it is a gratification to me that such large numbers are becoming interested in the structure and functions of their bodies. It will, I am sure, be a great help to all in the preservation of their health. It fits in very well with the work in hygiene now being given to all students in the University.

Some important additions have been made to the equipment of the Department by the laboratory mechanician. Apparatus valued at nearly \$500 has been constructed this year.

The research work in the Department, which was interrupted by the war to a large extent, has been resumed and considerable progress has been made. Some very important investigations on the thyroid and parathyroid glands are being carried out by Dr. Simpson.

Biochemistry

Biochemistry is at present a subdivision of physiology but in the near future it is hoped that it may be made an independent department.

In addition to medical students, instruction in biochemistry was given to 82 students in the Colleges of Agriculture and of Arts and Sciences. There were five graduate students taking work in biochemistry. Certain needed additions were made to the laboratory and equipment which have greatly added to the safety, comfort, and efficiency of the work. Assistant Professor Sumner calls attention to the expense for chemicals which makes the appropriation inadequate for the needs. More semi-skilled help is needed also to care for the laboratory and chemical apparatus.

RESEARCH

While the principal work of the teachers in the Medical College is the training of medical students, it is absolutely essential that the teachers should be engaged in investigation and should encourage and guide the research among advanced students. In this connection permit me to quote from the statement of Professor S. H. Gage in the conference report of Faculty and Alumni of the Medical College at the Cornell University Semi-Centennial Celebration last year.

"But research is a slow process, and demands much labor. Often one works for months, sometimes for years, on a problem and finally can state the success or failure in a single sentence; but investigation is the only panacea against intellectual stagnation and death in a college. It requires a free play of the imagination to see the unsolved problems and how to attack them, and then a brave heart to undertake and carry on with tireless persistence, the labor necessary to solve them.

If research is the life of the college, how can that life be made fullest and most fruitful?

For this two things are necessary:

(1) The staff must be large enough to give the students the full attention and help that is their due without requiring any of the members of the staff to devote so much time and energy to the instruction that he has neither time nor strength left for the exercise of the creative imagination and for the exacting labor of research.

(2) The material equipment and facilities for research must be adequate. A genius may be able to teach all the time, and still carry on researches with self-devised and constructed equipment; but the main increase in knowledge, as in all other human attainment, has come and always must come through less gifted minds, and for such to be productive the conditions cannot be too unfavorable.

Our college has been highly favored except that the teaching staff has been so small that time and strength have not been sufficient to enable us to realize our standard. So far as the building and equipment go we have only gratitude. Dean Sage gave us Stimson Hall, and after his death Mrs. Sage on going through the spacious, well-lighted rooms felt a strong desire to add to her husband's generous housing of the College a fund by which the means for progress might be secured, and this gift has now come to us in a spirit of generosity, and with a breadth of vision worthy of all praise. It is thus stated on the bronze tablet in the main entrance to Stimson Hall:

'By the will of Sarah Manning Sage, widow of Dean Sage, there was bequeathed to Cornell University: "The sum of fifty thousand dollars, the income, or in the discretion of the University, the principal also to be used to promote the advancement of medical science by the prosecution of research at Ithaca by the Ithaca Division of the Cornell University Medical College in connection with any and all of the subjects at any time embraced in the curriculum of the Cornell University Medical School."'

It is the firm determination of the Faculty that its effort shall be worthy of this noble endowment."

LIBRARY

Early in the history of the Ithaca Division of the Medical College a separate library was established. The nucleus of this was from the library of Charles Edward Van Cleef, M.D., B.S., Cornell University, '71, the gift of Mr. Mynderse Van Cleef. This library has gradually increased in size, through gifts and purchases. In addition, a considerable number of books and bound volumes of magazines are kept in Stimson Hall so as to be more easily available for ready reference. To care for these books and to make them more useful, the part-time services of a librarian are necessary. The library has been most useful and helpful to those working in the Medical College.

NEEDS

The needs of the College are simply stated. They may be summed up as follows: Adequate salaries for the teaching staff; trained teachers in sufficient numbers so that all shall have time for growth through study and research; adequate equipment and facilities for teaching and research. These, of course, are the needs of every live, growing college. In many respects we have in the past been well provided for, but that we shall not lag behind and shall maintain our place among the leading medical institutions of the country, will require increased support in all of the above-named particulars. This could be best insured by an independent endowment of sufficient size, and it is earnestly hoped that this may be forthcoming soon.

The Medical College was established in 1898. It has grown and developed under your guidance, with constantly increasing standards and efficiency, until it now stands out as one of the leading medical colleges of the country.

This, the last report that I shall have the honor to make to you, I cannot close without expressing to you on behalf of the Faculty of the Ithaca Division of the Medical College, our sincere regret that you are no longer to be our leader. We have deeply appreciated your quick understanding of the problems of medical education and your sympathetic encouragement of our research work, your helpful suggestions and wise advice in our administrative problems and your unfailing regard for our opinions. The Faculty takes this occasion to extend to you its best wishes for happiness in the years to come.

Respectfully submitted,

ABRAM T. KERR,

Secretary of the Ithaca Division of the Medical College.

APPENDIX VII

REPORT OF THE DEAN OF THE NEW YORK STATE VETERINARY COLLEGE

To the President of the University:

SIR: I have the honor to submit herewith the report of the Veterinary College for the academic year 1919-1920.

The work has been along the usual lines of teaching and research, with very satisfactory results. Drs. Fish and Udall, heads of the Departments of Physiology and Medicine, respectively, returned from military service in time for the opening in September, which enabled us to begin the year with an experienced man at the head of each Department. The four-year course is now in operation for all classes. It is anticipated that the additional time will prove to be of great value in giving the students a more thorough preparation for their professional work. It has the further advantage of uniting them more closely to the University than was possible under the three-year curriculum.

The conditions brought about by the war reduced materially the number of students in the upper classes. The entering class, however, equals in number the average during the pre-war period. The total registration of undergraduates is 104, distributed by classes as follows: Freshmen, 41; sophomores, 20; juniors, 17; seniors, 24. There are three graduates, two taking the practitioners' course, and four men taking special work in horseshoeing, making a total of 113. The large number in the senior class is due to the return, after the war, of several students who entered in the three-year course. With very few exceptions, the students who left for military service have returned to obtain their degrees.

A considerable number of students in other departments of the University are taking one or more subjects in this College. A special course on Health and Disease of Domesticated Animals is provided for agricultural students. The instruction given to students in other colleges and the number taking the courses are as follows: In pathology, course on health and disease, 81; in physiology, 140; in bacteriology, 25; in horseshoeing, 2; graduate students, 14; making a total of 262 which, added to the Veterinary students, gives a grand total of 375 persons who are receiving instruction in this College. As heretofore, the Veterinary students received their instruction in animal husbandry, botany, chemistry, histology, and zoology in the respective departments of the University.

As a consequence of the high prices, it has been necessary to limit the equipment and restrict, to a very unsatisfactory point, the quantity of material needed for both teaching and research. The teaching has been affected the least because supplies for this purpose have been secured at the expense of those for research. The instruction, therefore, has been safeguarded, with the result that the scholastic records made by the students have been as good, if not better, than heretofore. The research on the larger problems has been retarded but not discontinued.

The Veterinary College is called upon to meet the requirements of a profession that is rapidly undergoing changes of far-reaching significance. The qualifications required of practitioners to render the service called for by owners of food-producing animals are far more complicated than when the service sought was limited practically to the equine species. Losses from diseases of all kinds affecting farm animals constitute the great hindrance to the animal husbandry of the country, an industry on which we depend for meat, dairy products, leather, and wool. The restriction of the ranges and the increase in population are rendering live stock conservation not only necessary but imperative. This calls for extended researches into the nature of many destructive diseases, the formulation of methods for their control and the education of animal owners in hygiene and sanitation that will give more efficient protection against disease. The selection of subject matter for a curriculum that will fit veterinarians satisfactorily for their varied professional duties, is an exceedingly difficult educational problem. To meet the demand as fully as possible the courses of study have been readjusted and special courses have been provided for students who are able to take them.

The belief prevailing in the earlier years of this College that practical veterinary medicine and surgery could not be taught successfully in Ithaca because of the lack of clinical facilities, has been disproved entirely. Through the efforts of the departments dealing with the applied subjects, we have an abundance of clinical material. There are few if any veterinary colleges that have better facilities for such instruction. The successful surgery that is being done keeps the surgical hospital well filled with patients. Horses and cattle are sent here from a considerable distance for special operations. The medical and ambulatory clinics provide a large variety of medical cases. Some of the patients are brought to the wards and others are treated on the farms where they belong. The small animal clinic is well patronized. Last year there was a total of 4039 cases treated in these clinics. They were distributed as follows: Ambulatory and medical, 1910; consulting and surgical, 1602; small animal, 527.

The artillery unit, located in the University in connection with the Reserve Officers Training Corps, requires about eighty army horses that are valuable for

teaching purposes, as all the medical and surgical attention which they require is given in the clinics. In connection with their military training, veterinary students are given valuable instruction in horsemanship.

The students not only have general clinical instruction but also much actual experience in the administration of anti-hog cholera serum and virus for immunizing hogs and in the application of tuberculin, the two most important features of infectious disease control in this State. Ample facility for a thorough system of post mortems on all fatal cases is in operation. This furnishes a useful check on the clinical teaching, since in case of death it enables the student to ascertain at autopsy the true nature of the disease in question. Although there is much to be added, the equipment is sufficient, and clinical material is abundant for students to qualify in all subjects required for practical veterinary service.

The diagnosis and preparation of certain biologic agents for diagnostic and preventive purposes have continued, with growing interest on the part of the practitioners. The assistance rendered to both veterinarians and livestock owners is well illustrated by the fact that losses from epizootic diseases are steadily diminishing as a result of early diagnosis and the prompt application of preventive measures. These have practically removed the menace of anthrax from many localities and it will eventually be eliminated. Last year 1316 specimens sent here by animal owners or their veterinarians were examined for diagnosis. These included 84 for anthrax, of which but 14 were positive; 285 for rabies, of which but 143 were positive; and seven for John's disease, of which but two were positive. There were distributed 12,800 doses of anthrax vaccine; 2282 doses of mallein and 72,549 doses of tuberculin. Of anti-hog cholera serum there were 538,420 mls furnished to swine owners and veterinarians of the State. This is an increase of nearly 50 per cent over the previous year, and this year the call for the serum has been greatly in excess of that of a year ago. Of the tuberculin distributed, 33,300 doses were for the Department of Farms and Markets.

For the reason already mentioned, research has been restricted more than we anticipated would be necessary. Experimental work in connection with the diseases of breeding cattle was practically checked and other researches were interrupted. Notwithstanding this, many valuable results have been obtained and important contributions have been made to the advancement of both the science and practice of veterinary medicine. A leading practitioner has written that "the work by Professor Williams in research in the control of abortion and sterility is of inestimable value to the live-stock industry of the State and Nation". Important work has been done on pneumonia in swine and on a destructive disease of cattle that has appeared recently in the State. In the report to the Legislature a detailed account of this work will be found.

The inability to continue certain investigations made it possible to take up numerous lesser problems that needed attention. To correct the little errors in both theory and practice pertaining to the nature, treatment, and control of animal diseases, is quite as helpful as to add new principles. Furthermore, it would seem that improvement in methods of instruction whereby the student will grasp existing knowledge more fully and apply the details of technical methods in practice more accurately is, perhaps, as important as research. It is possible, therefore, that the temporary embarrassment in investigational work may result in an increased benefit to the profession.

In January, the annual Conference for the veterinarians of the State was held. The large attendance and the interest manifested by those present are assurances of the appreciation of this short period dedicated to the aid of practitioners. Lectures on special topics by experts, the presentation of the problems of practice by practitioners and their discussion by specialists are making for a better veterinary service. At the request of those present, the papers presented appeared in the April number of the *Cornell Veterinarian*, a copy of which was sent to every practitioner in the State. In addition to the Conference, members of the faculty have, at the request of various groups of veterinarians and breeders, given instruction in several special topics. Although the College has no appropriation for extension work, it allows members of its Faculty to assist in the solution of problems involving animal diseases when occasion requires their help. In this way, a real service is being rendered to the live-stock industry of the State.

We have lost three members of the instructing staff by resignation during the year, and there are tempting offers for several others. It is essential to the success of the College that tried and experienced men be retained for both teaching and research. It is hoped that the modest advance made in salaries for next year, added to the loyalty of the men, will prevent further changes.

The legislature of 1919 authorized the construction of a south wing to James Law Hall at a cost of \$100,000, and made an appropriation of \$30,000 to that end. It was expected that the remaining \$70,000 would be appropriated this year and that the addition would be constructed during the present summer. Because of the high cost of building the Legislature did not make the additional appropriation, but it is understood that as soon as building conditions return approximately to normal the money will be appropriated. The wing is very much needed for administrative offices, a library and an auditorium. The appropriation for the maintenance of the College for the year 1920-1921 is \$109,705. It includes the salaries of two men whose appointment was authorized: one to study the diseases of poultry and the other the maladies of sheep. It is anticipated that these special researches will be productive of much benefit to the owners of sheep and poultry, as well as contribute valuable scientific knowledge.

The Faculty of this College regrets exceedingly the retirement of our President. The College came into being as a result of his untiring efforts. It was the first state-supported veterinary college in the United States and the first state college incorporated as an integral part of Cornell University. From its beginning, President Schurman has been keenly interested in its work. At all times he has been a wise adviser and has in every way encouraged and strengthened our efforts. The Faculty wishes to record its hearty appreciation of President Schurman and his loyal support for these many years. He has done more than any other to make possible the advancement of veterinary education in America.

The degree of success that has been attained in carrying out the purposes of this College is due to the hearty co-operation of the members of the faculty. They are united in the effort that the College shall meet its obligations to the live-stock interests of the State, to the University, and to the students who come here for instruction.

Respectfully submitted,

V. A. MOORE,

Dean of the Veterinary College.

APPENDIX VIII

REPORT OF THE DEAN
OF THE NEW YORK STATE COLLEGE OF AGRICULTURE

To the President of the University:

SIR: I have the honor to submit herewith a report of the work of the New York State College of Agriculture for the academic year 1919-1920.

THE LEGISLATIVE PROGRAM

The problem that has demanded major attention during the year just closing has been the necessity for relief for the College in the way of more adequate compensation of teachers, freedom from the stifling effects of the minutely segregated Appropriation Act which the State has employed during recent years, and provision for housing the work of the College more nearly in accordance with its requirements. All of these matters have been discussed at length in previous reports of the Dean of the College, and we are happy to be able to record at this time substantial progress in them all.

On November 13, 1918, the Dean presented to the Agricultural College Council a detailed report of the needs of the College for additional buildings, reviewing the requirements for each department in turn, and recommended that steps be taken to prepare a plan for the enlargement of the college plant in accordance with the expressed needs of the departments. Specifically, it was proposed that the Council should appoint a committee of three of its members to co-operate with the President and the Dean in investigating the building requirements of the College; to visit, as might be needful, other agricultural colleges to study types of buildings for particular purposes; to prepare for the consideration of the Trustees a statement and description of the buildings that should be provided; to request the Committee on Buildings and Grounds to prepare a plan for the location of the buildings; to invite the State Architect to prepare preliminary plans as a basis for requesting state appropriations; and to devise ways and means for presenting these needs to the Legislature, looking toward the adoption of the entire plan by the Legislature with a view to obtaining early authorization to begin construction on several buildings and consecutive provision for the remaining needs. In this report confidence was expressed that "we shall have the earnest support of farmers of the State in presenting our needs to the Legislature." The Council approved the proposal that a plan of enlargement be developed. It did not appoint the committee requested, but instructed the Dean to make the studies and prepare tentative plans for definite consideration by the Council.

It is of interest to record here also that the Chairmen of the Joint Legislative Budget Committees subsequently requested the Daen, in February, 1919, to prepare a comprehensive plan for the further development of the College for their consideration at the 1920 session of the Legislature.

Acting on these commissions, active steps were taken to make an exhaustive study of the building requirements. The departments of the College were

requested to consider their needs with great thoroughness. This they were glad to do; and their careful work provided the basis on which all subsequent plans were developed.

It soon became apparent that in considering the future demands to be made on the College it was highly desirable, if, indeed, not imperative, to learn what progressive farmers and others interested in the rural affairs of the State wanted the College to do and to become, so that the final decisions might combine the best judgments of the staff and the persons who are naturally most concerned in the work and facilities of the institution. Accordingly, and after consultation with several of the most active farm leaders in the State, it was determined to invite to the College, at their own expense, a large number of farmers, in groups, to study in detail the work and needs of the several departments. The persons to be invited were nominated by the heads of several of the larger farmers' organizations, editors of agricultural papers, members of the college staff, and others. The names were assorted so as to bring together in a single group or committee, persons especially interested in the work of a particular department. In all, twenty-four groups or committees, including a few more than 300 persons, were invited to come at various times during the months of October and November last. Nearly half of those invited found it possible to come.

The committees, on arrival, were asked to make a thorough study of the work of the departments to which they were assigned, including a review of the courses of instruction, the experimental and research work, and the extension activities, as well as buildings and facilities, and to offer suggestions for improvements. Each committee was asked to make a written report with recommendations, which was done. The combined reports constitute a very valuable and unique body of suggestions for the development of the institution.

Because of the time required—one or two days—to study the work of a department, each committee could study but a single department. In order that the final recommendations might be considered from the standpoint of the College as a whole, each departmental committee was asked to designate two of its members to return to a joint conference on December 5. The interest of farmers in the undertaking is nowhere better revealed than by the fact that the meeting on December 5 was attended by an almost complete representation of delegates, these coming again at their own expense.

The committees of farmers were not asked to consider the question of salaries of teachers, although this had become by far the most serious and acute problem affecting the College. Their studies, however, soon revealed losses actual and threatened from the staff, and many of the departmental committees called attention to the urgent necessity that a new and higher salary scale be established.

The meeting on December 5, after a full day of deliberation, adopted the following recommendations:

- (1) That the building program as outlined in the Summary of Recommendations herewith attached and made a part of this report, be approved and adopted as the program to be presented to the Legislature. (This program enumerates the buildings required, estimated to cost at present prices more than \$5,000,000.)

- (2) That the Legislature be asked to appropriate in 1920 the sum of \$2,000,000 to start three large buildings in the following order: Plant Industry, Rural Engineering, Dairy Industry; and

it recommends also that any part of this appropriation not needed for the above-named buildings should be available for other buildings most urgently needed.

(3) That the Legislature during the session of 1920 be asked to authorize the drawing of plans to cover the remainder of the program as recommended, and that the Legislature be asked in 1921 to appropriate funds to start all other buildings provided for in the committee recommendations.

(4) That the "budget system" be changed so that, while the proposed expenditures shall be itemized in detail, appropriations shall be made under general classifications only, such as (1) personal service, (2) maintenance, and (3) repairs and replacements; that the administrative officers in charge of the institution be given the power of distributing the available funds granted under these general heads; and that this recommendation shall apply to all state educational institutions.

(5) That the Dean of the New York State College of Agriculture should be further relieved of detailed administrative duties, and to that end it is recommended that a vice-deanship of resident teaching and a vice-directorship of research work be created, with minimum salaries of \$6000 for such positions.

(6) That a salary of \$10,000 be provided for the Dean.

(7) That the following salary scale be recommended as a minimum: For heads of departments, \$5,000; for full professors, \$4,000; for assistant professors, \$2,500; for instructors, \$1,500; for assistants, \$800; for stenographers, \$900.

(8) That, whereas the small increase asked for by Dean Mann in the budget for 1920-1921 will be wholly inadequate and will furnish no relief such as is desired, the salary estimates submitted by Dean Mann for the fiscal year beginning July 1, 1920, be revised in accordance with the minimum scale heretofore recommended, and that the changes in the salary scale recommended by the Committee become effective for the fiscal year beginning July 1, 1920.

(9) That the staff of the College be developed to meet the expansion approved by the several committees which have made studies of the needs of respective departments, and that the executive committee of this general committee make more detailed and specific studies and recommendations toward developing the work of the respective departments and toward adequate funds for maintenance.

(10) That the executive committee should submit the recommendations of the general committee to the various members who have attended the conferences at the College, for their individual approval and signature.

(11) That the executive committee should take immediate steps to place the recommendations and conclusions of this conference on the needs of the College before the Agricultural Conference Board and before the leaders of all the farm organizations in New York State; and that such other steps be taken as are necessary to acquaint their various subordinate organizations or local branches with the recommendations of this conference as to the needs of the College.

(12) That the executive committee and the Dean invite the press of the State to visit the College and study its service to the people of the State and its needs.

(13) That the executive committee ask a subordinate committee consisting of one member of the faculty group and one representing

farmers, to formulate a statement as to what the College of Agriculture means to the agriculture of the State.

(14) That in working out these plans, special emphasis be placed on acquainting the consumers of the State with the value of the College to them.

The conference appointed a committee to carry out its recommendations. This committee reported to the Agricultural Conference Board on December 22, when the findings and recommendations of the conference of December 5 were unanimously approved and there was created a "Farmers' Joint Committee for the Promotion of Education in Agriculture and Home Economics in the State of New York," consisting of the following persons: William A. Mather, Chairman, Adams; E. R. Eastman, Executive Secretary, 303 Fifth Avenue, New York City; James Fear, Recording Secretary, Holland Patent; Mrs. Lewis Seymour, 150 North Street, Binghamton; F. A. Salisbury, Phelps; C. F. Mason, Williamson; Daniel Dean, Nichols; State Horticultural Society, E. C. Gillette, Penn Yan; Dairymen's Association, H. C. Troy, Ithaca; State Grange, W. N. Giles, Skaneateles; Farm Bureau Federation, S. L. Strivings, Castile; Home Bureau Federation, Mrs. A. E. Brigden, Cortland; Dairymen's League, Inc., R. D. Cooper, New York City; State Agricultural Society, C. F. Boshart, Lowville.

This committee, individually and collectively, have actively sponsored the cause of the College before the people of the State and the Legislature, and large credit is due them, and the great body of farmers who supported them and whom they represent, for the successful outcome of the legislative effort. The College of Agriculture and the people of the State are alike indebted to them for their public service ably discharged. The College belongs to the people of the State. They established it as a state institution and they have ever come to its support in its times of special need. The College is deeply sensible of its increased responsibility for efficient productive service to the State which the renewed expression of confidence and larger provision for its needs impose.

On December 20 the Agricultural College Council met to consider the recommendations of the Dean for the development of the College, these recommendations being substantially the program which was put forward by the farmers' committee and which represented the best judgment of the staff and those who had studied the institution. The Council voted to "approve in principle the findings of the [farmers'] conference and concur in the larger conception of the importance and the requirements of the College". The Council made its recommendations in detail to the Board of Trustees, by which body they were affirmed on January 3, 1920, for transmission to the Legislature.

THE RESULTS

The Appropriation Act passed by the Legislature and recently approved by the Governor carries the following items for the State College of Agriculture:

(1) For regular maintenance for the year 1920-1921, \$1,270,888.80, an increase of \$260,170 over the appropriation for the year 1919-1920. Of this increase nearly three-fourths is applicable to increases in salaries of the staff. While these increases will still leave us considerably below the minimum scale recommended by the farmers' committee and concurred in by the Trustees, they afford very substantial relief to a deserving and grateful faculty.

(2) Salary provision is made for a vice-dean of resident instruction, a vice-director of research, three new professorships in agricultural economics and farm management, a new professorship in plant pathology, and three additional assistant professorships in home economics.

(3) For new construction, a special provision "To further the development of the State College of Agriculture, Cornell University, providing for its extension through a plan to be approved by the Trustees of said University, by or before December 1, 1920, an authorization of three million dollars (\$3,000,000) is hereby made. The State Architect may employ such experts and other assistants as may be needed for the proper development of plans, soil surveys, test pits, test borings, and the conduct of such work, and their compensation shall be fixed by him and paid from appropriation made herewith, with the approval of the Trustees of Cornell University. For the purpose of commencing such work, the sum of five hundred thousand dollars (\$500,000) is hereby appropriated."

The bill also carried a separate appropriation of \$17,000 for beginning the construction of a cold storage plant.

(4) The appropriations for salaries of the teaching staff are combined for the several grades, heads of departments, professors, assistant professors, instructors, and assistants, in such a way as to allow the authorities discretion in fixing the salaries of individuals within these groups, except that a prescribed maximum salary and maximum number of appointees within each group shall not be exceeded. This departure from the narrow segregation which has obtained heretofore will afford a measure of relief greatly to be welcomed. It is to be regretted that there continues to be no administrative freedom or discretion in the adjustment of salaries of employees other than teachers.

The results of the legislative program as a whole have been successful and gratifying beyond our early expectations. With the many pressing demands made on the Legislature and the Governor for the maintenance and enlargement of the State's varied activities, the treatment accorded our requests this year has been notably generous. The sympathetic interest in and appreciation of our requirements by Henry M. Sage, Chairman of the Senate Finance Committee, H. Edmund Machold, Chairman of the Assembly Ways and Means Committee, and Lewis F. Pilcher, State Architect, all of whom made special studies of the needs of the College by personal visits, and by Governor Alfred E. Smith, who approved all of the items submitted to him by the Legislature, made possible the accomplishment of the undertaking. Grateful acknowledgment is made to them. I desire also to record appreciation, on behalf of myself and my associates in the College, of the constant helpfulness of the President and members of the Board of Trustees throughout the entire course of our efforts.

THE PROPOSED COLLEGE OF HOME ECONOMICS

The teaching of home economics had its inception at Cornell University in the year 1900, when Miss Martha Van Rensselaer was appointed to initiate special work on the problems of farm women. Her first undertaking was the establishment of a reading course, which within less than one year attained an enrollment of six thousand readers. From this beginning the work has gradually expanded. In 1904, when the State established the College of Agriculture at Cornell University as the New York State College of Agriculture, it assumed responsibility for the

promotion of the activities of the College, including the work in home economics. By 1907, this work had attained such proportions that the Trustees recognized it as a separate department in the College. In 1911, the State appropriated \$154,000 to provide a special building for housing the department. On September 20, 1919, the Trustees designated the department as the School of Home Economics in the State College of Agriculture, this action being taken in recognition of the rapidly increasing importance, scope, and specialization of the work, and the fact that the department had become practically a self-contained professional school; and in the request made to the Legislature at this meeting, that body was urged to complete the school in buildings and staff as rapidly as possible.

The logical outcome of the growth of the work in home economics and the distinctive recognition coming to it, was the action of the Board of Trustees on January 3, 1920, requesting the Legislature to establish the school as a separate State College of Home Economics. Subsequently bills were introduced into both houses of the Legislature to accomplish the change. The bill passed the Assembly but was held in committee in the Senate. This was not altogether unexpected, as time is required to effect an appreciation of the larger importance of the field of home economics in state welfare. The bill will ultimately pass. It is inevitable that this field of special interest to women, with its own body of knowledge and range of activity, shall receive the recognition which it deserves. The proposal at once received the endorsement of women's organizations and thousands of individual women throughout the State.

The change proposed is little more than a change in name and in administration. The main lines of work in a professional college of home economics have already been provided by state appropriation. Such additions to the staff and to buildings and facilities as the work calls for will be required to care for its normal growth whether it is recognized as a separate college or continues as a school in its present relationship. The State will profit more largely from the work which it has already established here when it gives to the work the larger recognition which will result from the change in name.

AFFILIATION WITH THE STATE AGRICULTURAL EXPERIMENT STATION

One of the most gratifying and promising events of the past year has been the affiliation effected between the State College of Agriculture and the State Agricultural Experiment Station at Geneva. The formal act of affiliation was the consummation of a discussion between the institutions extending over several years. The bond that has been established did not involve legislative authorization, but has been effected on the basis of the powers which the authorities of the two institutions now have under the law. On February 14, 1920, the Committee on General Administration of the Board of Trustees of Cornell University took the following action:

Resolved, That the acceptance by members of the staff of the College of Agriculture of appointments to the staff of the New York State Experiment Station at Geneva, without pay and without required duties, is hereby approved, the members of the staff so appointed to be those mutually agreed upon by the Director of the Station and the Dean of the College of Agriculture.

Resolved, That the President is hereby authorized to nominate for appointment to the staff of the New York State College of

Agriculture such members of the staff of the New York State Experiment Station at Geneva, without pay and without required duties, as may be mutually agreed upon by the Director of the Station and the Dean of the College of Agriculture.

Similar action had been taken by the Board of Control of the Experiment Station a short time before.

Under the new arrangement each of the institutions will maintain its present organization and functions, and no change will be involved in the status of the men affected in their respective institutions. The affiliation will promote the interests of both, which at times are closely parallel, and will make possible an exchange of work and workers between the two institutions. It will be possible for the staff of the College of Agriculture to have access to the materials and laboratories of the State Experiment Station, and the investigators at the Station can take advantage of the facilities at Ithaca. Conferences will be promoted between the workers at the two institutions, resulting both in a better mutual understanding of the work in progress at the two places and the removal of the likelihood of any unnecessary overlapping. It is hoped also that the arrangement will be advantageous to graduate students who may be connected with either institution.

While under the law both institutions are required to conduct investigations and research, and both have maintained some extension work, the relations between the institutions have been notably harmonious and cordial, and the affiliation has been mutually desired. The more intimate relationship now officially established promises an increasingly pleasant and beneficial association in future. The step is an important one in the furtherance of the State's program for the promotion of education and research in agriculture.

The members of the State Experiment Station staff who have been appointed to professorships in the College of Agriculture at Cornell University are: Dr. U. P. Hedrick, professor of pomology; Dr. L. L. VanSlyke, professor of dairy chemistry; F. C. Stewart, professor of plant pathology; P. J. Parrott, professor of entomology; Dr. R. S. Breed, professor of dairy bacteriology; R. J. Anderson, professor of animal nutrition; R. C. Collison, professor of soil technology; Dr. W. H. Jordan, professor of animal nutrition.

Members of the State College who have been appointed to places on the staff of the Experiment Station are: Dr. T. L. Lyon, chemist in Division of Agronomy; Dr. R. A. Emerson, geneticist, Division of Horticulture; W. A. Stocking, bacteriologist, Division of Bacteriology; Dr. L. A. Maynard, biochemist, Division of Biochemistry; G. W. Herrick, entomologist, Division of Entomology; Dr. Donald Reddick, botanist, Division of Botany; A. R. Mann, Agricultural Economics.

THE INCREASING IMPORTANCE OF THE ECONOMICS OF AGRICULTURE

For many years the chief activities of the agricultural colleges and experiment stations were concerned with plant and animal nutrition and with other problems of plant and animal production. With the enormous actual and relative increase in city populations, rapid changes have come. The problems of plant and animal growth are more important than formerly, but are no longer the only questions with which agricultural education and research are concerned. The rapid growth of cities and the relatively slow increase in numbers of persons engaged in agricul-

ture means that each worker in agriculture must sell much greater quantities of food than were formerly sold per worker. With these changes, new problems of business methods on the farm, financing of farm operations, transportation and marketing of products, and the maintenance of satisfactory living conditions on farms, have arisen.

Now that agriculture is more of a business and less of a self-sufficient home industry, the problems of business organization and management of farms are of the utmost importance. For many years this College has been doing extensive work in studying and teaching methods of farm organization and management. The data on costs of production of various farm products and on living conditions on farms have been of service to price commissions. The State Census of Agriculture tabulated by the former Department of Farm Management, and data obtained in co-operation with the United States Bureau of Crop Estimates on labor, housing, and living conditions on farms, have all helped to direct public activities related to agriculture. They have also aided in stabilizing conditions on farms. The price studies have been of help in steadying production. Studies are now being made of farm labor, the movements of farm population, the standard and cost of living on farms, and the combination of agriculture and factory work for industrial employees.

Many persons leave the farms because they do not see the means of engaging profitably in farming without capital. Some studies have been made of the means by which such persons may acquire the necessary capital and credit. The means by which credit agencies may furnish the necessary capital for agriculture require study. Recognizing these needs, the State has this year provided a professorship in farm finance.

The large and constantly increasing quantities of food that must be moved over our roads, railroads, and waterways have created many new problems in transportation. A professorship in transportation has been provided for next year.

So many economies can be made by assembling business for quantity buying and selling that the organization of co-operative associations of farmers has been very rapid in recent years. The determination of the best methods for the formation and management of such associations and the dissemination of this knowledge is one of the important duties of the College. The wool auctions, the central packing houses for fruit, co-operative purchases of stock feed, and co-operative ownership of milk plants, are among the important developments in this field. Perhaps no problem is today arousing more controversy and causing deeper concern than the problem of distribution of food. Improvement in the methods of distribution to keep pace with the growth and congestion of population is one of the outstanding needs of the near future. A new professorship of marketing has been established for next year.

All this work in the College is now centered in the Department of Agricultural Economics and Farm Management, a combination of the former Departments of Farm Management and Rural Economy effected by the Trustees on September 20, 1919. For the present and immediate future much of the work of this department must be given to investigation, in which results come slowly. Much has already been done. There are large numbers of regular and winter-course students seeking instruction in these subjects, and extension teaching among farmers has reached

considerable proportions in response to insistent demands. As an indication of the importance attached to the work it may be pointed out that thirty-one graduate students from this and other countries are now registered for special study in the Department of Agricultural Economics and Farm Management.

THE SOCIAL PHASE OF COUNTRY LIFE

It is becoming increasingly apparent that the problems of agriculture are not solely those of the technique of production and distribution. Agriculture is at once a vocation and a mode of life. If the farm enterprise is to have permanent success, life must be satisfying to the farm family. More economic production and more profitable prices for farm products are essential, but economic prosperity will not of itself make the life of the rural community fully satisfying. Many of the material advantages of the city can be purchased by farmers if they have more adequate incomes, but the superior opportunities of cities for recreation, education, social and religious life, will continue to draw an undue proportion of the more ambitious people from farms and villages until the rural community is so organized that it can compete with city attractions. The social problems of country life cannot be longer neglected if we are to maintain the best type of American citizenship on our farms.

Our new understanding of human nature and of society has been developed by the sciences of psychology and sociology chiefly with regard to life under urban conditions; but the use of the methods of these sciences in the study of rural life reveals parallel series of rural social problems challenging the best scientific ability. Indeed it seems probable that thorough scientific study of the structure and process of rural society, representing the type of social organization under which the mass of mankind has lived from the dawn of civilization, may do much to reveal principles of social behavior which are essential to the solution of the problems of our more highly complex urban society. The increased contact of rural people with cities, better communication within rural communities, and the more general reading of the press and periodical literature, are arousing their interest in rural social conditions. Having received assistance from the College of Agriculture in their problems of production, the people of the open country now look to it for assistance in solving those of social organization. We are as yet meagerly equipped to meet these needs, but have made a good beginning.

The chief effort of the Department of Rural Social Organization in the College at the present time is to give some fundamental training in the social problems of rural communities to undergraduate students, very many of whom will go into positions of leadership where they can educate public opinion to the importance of these problems and can arouse interest which will result in community progress. The demand for trained teachers and leaders in rural sociology and rural social work greatly exceeds the supply. Because of its pioneer work in the Country Life Movement, Cornell University is expected to take a place in this new field, and it is hoped that strong courses will be developed for graduate students seeking to fit themselves for these positions. The scientific study of rural social problems is but begun, and is now developing methods and inventing technique. Investigation in this field is slow and costly, being largely dependent at the present stage on the survey method, and requiring a considerable volume of data before interpretation

can be attempted. With the present unrest among the industrial and agricultural classes, it is of the highest importance that such investigations be pushed as rapidly as possible, so that we may have some measure of scientific information as a guide for shaping social policy. There is already an insistent demand that immediate assistance be given to rural communities in planning such enterprises as community buildings, church surveys, recreation programs, and community organization. This demand should be met without neglecting the more fundamental work of investigation. Without such a practical testing of the principles of rural social science, thus far stated tentatively, there can be no real proof of their validity, so that permanent advance in this field must always depend upon the opportunity for successful application of the principles advanced. The College needs, and has requested of the Legislature, additional teachers for both the resident and the extension phases of the work.

THE RURAL EDUCATION PHASE

Since the passage of the Federal Vocational Educational Act, in 1917, funds from state and federal sources have made possible a considerable development of the Department of Rural Education. The regulations governing the expenditure of the funds provided for under the Vocational Act make it necessary, however, for the department to limit its instructional work to prospective teachers of vocational agriculture and home economics. This condition needs to be remedied by a proportionately larger appropriation of state funds so that we may meet the demands of a considerable number of students who each year desire professional work but who wish to enter other phases of teaching than those of vocational agriculture and homemaking.

A larger responsibility than this, however, is before the College. Aside from its extension activities, which center in the *Cornell Rural School Leaflet* and the Junior Extension work, the Department of Rural Education has little contact with the problems of elementary education in the rural communities of the State. Both of the aforementioned activities are proving their worth, but the scope of the department needs to be broadened so as to relate its work to both the elementary and the secondary schools of the rural sections of the State if we are to make our full contribution to rural education.

The importance of this was forcibly brought to the College during the last Farmers' Week, when the State Conference of Farm Organizations passed a resolution asking the Department of Rural Education to organize a committee that should be representative of both the farming and the educational interests of the State for the purpose of formulating a program for rural school betterment. Sufficient time has not since elapsed to permit large accomplishment as a result of this action. It is already evident, however, that there is need for a larger and more exact body of information regarding school conditions in the State than is at hand. Our Department of Rural Education should have members on its staff who are free from the restrictions of the Vocational Educational Act so that they may co-operate with the State Department of Education in making such studies as will furnish the needed data.

The need for a body of well-prepared men and women for leadership in developing the professional phases of rural education in the State becomes daily more

apparent. Such men and women are required to administer and supervise the rural schools and to prepare teachers adequately for service in them. While these teachers should have the highest professional attainments, it is just as important that they should be intelligently sympathetic with life in the rural community. They should be familiar with the economic and social problems of the community. The background of a college of agriculture makes it the logical institution to prepare persons for this service. Especially is this true in our own College, in which the economic phases of the work have a comparatively large measure of development and the sociological phases are well started.

The suggested development involves no duplication of the work of the State Department of Education. It will be a means of supplementing the activities of the latter. The College of Agriculture recognizes that responsibility for the administration and supervision of the schools of the State is vested in the State Department of Education. The suggested additions will provide a means of furnishing trained leaders such as must be available if the Department of Education is to carry forward a progressive program in rural education. They will also make possible such a degree of co-operation in investigative work as will strengthen the teaching in the Department of Rural Education and will furnish data that are needed for the guidance of the State Department of Education in administrative action.

CHANGES IN THE STAFF

During the year covered by this report there have been a number of important changes in the staff. We have lost the following valued teachers, who have accepted calls to other fields: Karl J. Seulke, Professor of Animal Husbandry; Mark J. Smith, Assistant Extension Professor of Animal Husbandry; John H. Voorhees, Assistant Extension Professor of Farm Crops; Warren K. Blodgett and James L. Strahan, Assistant Extension Professors of Rural Engineering; Lex R. Hesler, Assistant Professor of Plant Pathology; Royal Gilkey, Assistant Professor in Extension Service.

The following appointments have been made since July 1, 1919: E. L. Worthen, M.S., formerly of the Pennsylvania State College, Extension Professor of Soil Technology; J. E. Butterworth, Ph.D., formerly Dean of the College of Education of the University of Wyoming, Professor of Rural Education; J. D. Brew, B.S., formerly of the State Experiment Station, Assistant Extension Professor of Dairy Industry; E. L. Palmer, Ph.D., of Iowa State Teachers College, Assistant Professor of Rural Education; L. H. McDaniels, Ph.D., Assistant Professor of Pomology; Miss B. E. Scholes, B.S., Assistant Extension Professor of Home Economics; F. G. Behrends, B.S., Assistant Extension Professor of Rural Engineering; R. M. Adams, B.S., A.B., Assistant Extension Professor of Vegetable Gardening; H. W. Dye, Ph.D., Assistant Professor of Plant Pathology.

On May 1, 1920, the Board of Trustees appointed Dr. Cornelius Betten, who for five years has served the College with conspicuous success as Secretary and Registrar, to the newly created position of Vice-Dean of Resident Instruction, a position for which he is eminently qualified by training and experience and the confidence of his associates. Robert P. Sibley, of Lake Forest College, was on June 21 appointed Secretary of the College.

On June 21, 1920, the Board appointed Dr. W. H. Chandler to the new position of Vice-Director of Research. Dr. Chandler came to the institution in 1913 primarily to engage in pomological research. When Professor C. S. Wilson was appointed State Commissioner of Agriculture, in 1916, Dr. Chandler was made head of the Department of Pomology. His scientific accomplishments, together with his demonstrated ability in administration, commended him to his colleagues and to the Director for the more responsible duties of the vice-directorship of research.

I desire to express to you, President Schurman, on the eve of your retirement from the distinguished position which you have long held, my deep sense of gratitude for your confidence, helpful counsel, and unfailing support in the work in which we have been intimately associated during the past four years. Please accept this expression of my esteem and wishes for your continued health and happiness.

Respectfully submitted,

A. R. MANN,

Dean of the New York State College of Agriculture.

APPENDIX IX

REPORT OF THE DEAN OF THE COLLEGE OF ARCHITECTURE

To the President of the University:

SIR: I have the honor of submitting herewith a report of the work of the Faculty of the College of Architecture for the academic year 1919-1920.

This report is one which is more in the nature of a report of progress than of tabulated accomplishments; a report of general policies adopted and inaugurated rather than a past history. The work of the Faculty has been directed toward the future; its interests have been focused in that direction and its work during the past year has been that of bridging the confused period which always accompanies a change from one system to another.

At the beginning of the scholastic year a new curriculum was tentatively adopted for the future, and a transition curriculum for this year was put into effect which in many cases entailed a virtual doubling of the work on the part of certain of the staff in order to reduce the time of transition to one year rather than to spread it over a longer period. I can not let this occasion go by without paying a tribute of respect to the unselfish spirit of devotion to work which so cheerfully undertook this extra effort.

During the scholastic year the Faculty has been constantly studying and perfecting its new curriculum, which has now been officially adopted in full and which embodies so far as may be its belief as to what the educational function of the

College of Architecture should be. The various requests that have been officially made to the Board of Trustees for authorization to do certain things have all been a result of this study and a part of the general program of this Faculty: The establishment of a course leading to the degree of Bachelor of Fine Arts; the definite official form of limitation of the number of students enrolled in this College, and lastly, the request for the adoption of a definite policy on the part of the Trustees in regard to the future housing of the College.

Our new curriculum is based upon the thought that the real function of a College of Architecture is more than to give the fundamental instruction needed for the practice of architecture alone; rather that its function is to give such instruction to those who are to make any of the building arts their vocation in life; that architecture is a profession too all-embracing, too varied in its phases to be separated into one of the component parts; that it is a part, not of construction alone, not of art alone, but of the art of building.

In order to accomplish this, our curriculum as adopted has laid down what may be considered three main trunks containing, as well as time avails, the essential requisite fundamentals; and in the later years of the course has inaugurated elective privileges, giving thus to the individual temperament opportunities for slightly greater specialization along particular lines.

Due to the fact that the entrance requirements to the regular four-year course of architecture in the College are very detailed (only three of the fifteen entrance units being left open), there has already been established for those students who are deficient not in total number of entrance units but in some specific units, a course known as the five-year course in architecture, the first year of which is to all intents and purposes a course taken in the College of Arts and Sciences. At the present time approximately 30 per cent of our students are enrolled in this five-year course. Our new curriculum recognizes this condition and has laid out what it hopes will ultimately become the main course in architecture, that is, a five-year course which gives to the student immediately on entering the University the beginning of his professional training and takes advantage of this extra time to make the instruction more thorough in the technical subjects and to increase, under definite conditions, the amount of the so-called humanitarian studies.

It was the study of this curriculum that has led to the request for the establishment of a course leading to the degree of Bachelor of Fine Arts. Such a course will take its place as one of the three main trunks, side by side with the existing courses leading to the degrees of Bachelor of Architecture and Bachelor of Science in Architecture. One of the particular reasons for this request is the legal restriction connected with the New York State law concerning the registration of architects, and the use of the term "Bachelor of Architecture" for any college degree which should not include certain technical subjects entirely unnecessary for the painter, mural painter, or interior decorator.

It is felt by the Faculty that an art such as architecture can best be taught in that institution where the closest personal relation between student and teacher is maintained; that with more than a certain number of students in any given course, teaching becomes a matter of routine and not a personal inspiration. The arts particularly, when successfully taught, have always been taught by the inspiration of personality. Quality and scholarship are the essentials; not quantity as applied to students. This is the educational reason upon which the policy of the limitation of numbers of students is based.

The request for the definite adoption of a policy on the part of the Trustees in regard to the housing of this College is considered by the Faculty to be a corollary of the principles which it has adopted. At the present time the College is housed in two different buildings and in different parts of these buildings. This physical separation of the various departments of the College makes it that much more difficult to foster the feeling of the unity of all the building arts. The present lack of space makes it impossible to acquire collections of objects of art and building materials which could be had for the asking were a place to show them at our disposal. I will only mention in passing the risk to our present library and collection of lantern slides, housed as they are.

The physical amalgamation of certain courses now given in the University but very closely allied with architecture must of necessity wait upon more adequate quarters. I speak of the courses in Landscape Architecture, now given so well in the College of Agriculture, but which I believe would gain, as certainly architecture would gain, by a closer connection with this College.

The campaign carried on by the Semi-Centennial Endowment Committee has made sufficiently evident the financial needs of this College as one of the component parts of the University, and I can add little to what has been said except perhaps to point out that a college which endeavors to give instruction in the technical subjects and in an art such as architecture is constantly faced with competition from active life in endeavoring to hold its staff. Furthermore, in teaching an art the vital spirit can be transmitted only by the man of experience, not by the beginner willing to start his teaching career with the grade of instructor.

I regret to report the resignation from our staff of Professor Shepherd Stevens, who leaves to accept a professorship in the Yale School of Fine Arts.

Respectfully submitted,

F. H. BOSWORTH, JR.,

Dean of the College of Architecture.

APPENDIX X

REPORT OF THE DEAN OF THE COLLEGE OF CIVIL ENGINEERING

To the President of the University:

SIR: I have the honor to submit the following report of the College of Civil Engineering for the fiscal year 1919-1920:

The registration for the year as shown by the class roll calls has been as follows:

	First Term	Second Term
Graduates	8	8
Seniors	68	64
Juniors	81	77
Sophomores	97	106
Freshmen	108	88
Freshmen, five-year course	14	11
	<hr/> 376	<hr/> 354

Instruction has also been given to students from other colleges as follows:

	First Term	Second Term
Graduate School	8	8
Arts	3	11
Agriculture	22	44
Architecture	6	7
Sibley College	38	51
	<hr/> 77	<hr/> 121

The number of new students was 143 the first, and seven the second term. Of these, 110 entered the Freshman four or five-year courses, 23 the Sophomore, 12 the Junior, and five the Senior classes.

The total registration was 376 for the first, and 354 for the second term. As compared with the previous school year these figures indicate a decided gain; in fact, they restore to the College nearly its pre-war numbers.

The work of the year has, I am sure, been very gratifying to our Faculty. To have so fully returned to normal schedules in so short a time is nothing less than marvelous. While as a whole there may have been some lack of the old time interest on the part of the student body, the spirit shown has been excellent. Many of our students who left in 1917, for war work, returned at the beginning of the year and have shown a zeal in the prosecution of their studies that is admirable. The coming year, as seen at this time, bids fair to be a prosperous one.

It seems fitting that a brief record should be made in this report of the College Conference held during the Semi-Centennial Celebration. It took place on the afternoon of June 20, 1919, and was well attended by both visiting alumni and undergraduates. A program was prepared for the occasion by a Committee of the Faculty consisting of Professors I. P. Church, chairman, S. G. George, and F. S. Seery. Three able papers dealing with the requirements for the proper training of a civil engineer were presented and discussed.

The first of these papers entitled "Some Phases of Engineering Education" was by Mr. John A. Knighton of the class of 1891; the second, entitled "Certain Propositions and Opinions regarding the Course" by Mr. Ira W. McConnell of the class of 1897; and the third, a joint paper entitled "The Civil Engineering Course Should be Highly Specialized" by Mr. R. S. Proctor and E. B. Whitman, both of the class of 1901.

The College here records its grateful appreciation of the services of these gentlemen in making the Conference a success. Their papers with the discussions are published in full in the December, 1919, number of the *Cornell Civil Engineer*.

The conclusion which I have drawn from the Conference is that the course in civil engineering as now given is a well-balanced one. I may add that the Faculty of the College made, in 1916, a very careful study of the curriculum of the leading schools of civil engineering and after mature deliberation adopted the present course which is but a slight modification of the work given in past years. In this instance they adhered to the long-established policy of giving as much practical work along with the theoretical as time and resources permit.

From time to time in previous reports I have pointed out the urgent need of funds for investigation and research. One needs but to watch the influence of our laboratories upon the student body to learn what a stimulus to better work investigation and research are. It is to be hoped that it is but a short time before funds will be available for these purposes. Hydraulic, sanitary, and highway engineering, in particular, offer sure rewards for well-directed labor.

Funds are also needed for new buildings to house new and better equipped laboratories. Agreeable surroundings cannot but lighten the burdens of the teacher, as well as inspire him to greater effort. We are at the door of a new era in higher education, when these necessities should be provided, and further, when the compensation of the man who is willing to become an educator should be equal to that gained in the learned professions.

In the half century of its existence the College has conferred the degree of Civil Engineer upon but one young woman and that in 1905. This Commencement it will have the honor of sending out a second woman graduate, and I may add that during the present year five others were registered in the College. More are coming; otherwise I judge the inquiries of the year amiss.

The more I study the problem, the more I am convinced that there is a fair opportunity in an engineering office, for a young woman graduate, if she is reasonably proficient in mathematics. In the work of design and construction, there is a vast amount of detail which I believe she would handle with marked success. The effort is hers, and success her reward.

Plans for the new College of Engineering to come into existence in June, 1921, have made good progress during the year. Committees have been at work upon the various problems of the combination of the two colleges into one having a common freshman year, with gratifying results. It is too early to announce details, but it can safely be predicted that everything will be in readiness by the spring of 1921, when the new announcement will appear.

In closing this report, Mr. President, I take great pleasure in recording the resolutions on your retirement adopted on May 24, by the Faculty of the College. The termination of the long-existing pleasant relations with you brings us many regrets; our best wishes go with you.

APPENDIX X

"The Faculty of Civil Engineering, in common with the other faculties of the University, desire to record both appreciation of the devoted services of Jacob Gould Schurman during his twenty-eight years as President of Cornell University, and the sense and corporate loss in his imminent retirement.

"The Faculty realize the high ideals that the President has always had for engineering education, ideals through which the Cornell engineer is gradually to be trained for nobler purposes, for greater service, and for larger fields, rather than to be equipped with mere mechanical skill and dexterity. Though his vision of truly educated engineers, men of culture and discernment, men schooled in the humanities as well as in the applied sciences, has not yet materialized, it stands as an ideal and as a goal for their further efforts.

"The Faculty desire to express their appreciation of the whole-hearted sympathy which the President has always shown toward productive scholarship and toward scientific research. By frequent reference to this highest function of a University, in his reports to the Board of Trustees, he has indicated to the governing body that the professor is more than a teacher of undergraduates.

"The Faculty also appreciate the constant efforts of the President to build up a Faculty in the College of Civil Engineering that should be recognized not only in the University, but also among engineers in the practice of the profession, as capable of maintaining high standards of professional ability. As a result the College has been accorded high esteem among the colleges of Cornell University and a high place among other technical schools in the minds of outside engineers.

"The Faculty has realized as a source of inspiration his untiring efforts for the University, his tactful solution of controversial problems and his keen insight into the merits of both administrative and educational questions, and have been drawn more closely to him with the passing years by his prompt recognition of teaching ability and by his generous appreciation of efficient ways of promoting scholarship.

"The Faculty acknowledge with gratitude the ready and sympathetic interest always meted out to them by the President, whether the matter to be discussed was entirely personal or administrative, and recognize his attentive and judicial consideration upon every question brought before him. Even when plans have been curtailed or vetoed, the necessity for such action has been so clearly set forth that no antagonism nor sting of defeat, with its consequent loss in educational efficiency, has resulted.

"The Faculty wishes for the President many years of productive service in whatever field he may enter, and are confident that their present loss will in due time, and in some manner, prove to be a greater gain to the country at large."

Respectfully submitted,

E. E. HASKELL,

Dean of the College of Civil Engineering.

APPENDIX XI

REPORT OF THE DEAN OF THE SIBLEY COLLEGE OF MECHANICAL
ENGINEERING

To the President of the University:

SIR: I have the honor to submit herewith a report of Sibley College for the year 1919-1920.

Before the opening of the session in October, 1919, it was anticipated that the maximum registration of students in the College would be 900; there were really 1150. This made readjustments in schedule necessary, as well as small additions to the teaching force. The emergency was met and the standards of instruction were maintained.

As a result of war conditions there has been a spirit of unrest and nervous instability on the part of students which has made sustained mental effort on their part very difficult. This has diminished during the year and next year will probably show a return to nearly normal conditions.

My report of last year, in a study of attendance, took the number of first-year students in the second term as a measure of the movement of students fitted for engineering training toward Sibley College. A table was given which is reproduced here with the addition of the record for the year just finished.

STUDENTS IN THE SECOND TERM

Year	First Year	Total
1910-11	234	1017
1911-12	260	984
1912-13	256	918
1913-14	226	843
1914-15	272	865
1915-16	264	870
1916-17	234	890
1917-18	233	593
1918-19	360	741
1919-20	378	1047

This table shows a fairly uniform number of first-year students in the second term from 1910-1911 till 1917-1918 although the total varied through a wide range. The reduction in total in 1917-1918 was due of course to the call to war service of the older men in the College.

In 1918-1919 the number of first-year men in the second term increased suddenly, partly because of the fact that the U. S. Government paid the expenses of those entering in the Students' Army Training Corps. It was predicted that this number would decrease during 1919-1920, but the records show an increase. This might be due in part to the return of students who were held from College by war service, but who entered one or two years later. Advices from the Registrar's office at this date, June 25, seem to indicate that the number will be maintained next year, 1920-1921, and it is probable that, there will be, because of after-war conditions, an increased movement of fit students toward Sibley College.

This conclusion, if justified, shows maintenance of the reputation of the College but brings up a very serious question: Shall the number of students in the College be limited?

With a given material equipment and Faculty in any college, a certain number of students can be handled with maximum efficiency. An increase in the number of students usually means, for financial reasons, the addition of teachers from the less experienced grades and hence reduced efficiency.

It is my opinion that, with the present Faculty and equipment, the number of students in Sibley College for maximum efficiency is about one thousand. It seems probable that, if no limit is set, there will be twelve hundred next year.

If the number can be kept down to a thousand it is believed that the "turn over" in the Faculty would be reduced and that, as the University Endowment increases, the proportion of teachers in the higher grades would increase and the work and reputation of the College would steadily improve.

This question of limitation in the number of students is serious not only for Sibley College, but for every college in the University, and for every university in any country with an increasing population. If some limitation can be enforced it will lead to the foundation of other universities, and there will be a large number of universities working at high efficiency rather than the relatively few that have become inefficient through overgrowth.

The chief difficulty in the limitation of registration is in making the selection of those to be admitted from an excess of applicants. There are of course two factors that enter into the fitness of a person for admission to a university course: mental ability and character. A person may be intellectually brilliant and yet a menace to society. In such a case a university education might increase his power for evil. Tests of mental ability are easily applied, but tests of character present great difficulties.

Some of the methods for selection on the basis of mental ability are:

(1) Raising and rigidly enforcing the entrance standard. This has been tried repeatedly in many places and has failed to limit the number. It may show results for a year or two, but secondary schools immediately aim higher and all their best students strive to meet the new standard and are successful. As a result the old rate of increase is re-established, or usually, increased.

(2) The Harvard method is to demand a satisfactory preparatory school record, and then to give four searching examinations, the subjects being: English, one foreign language, mathematics, and a fourth subject to be selected by the applicant. The readers of these papers do not judge them in the usual way and do not assign a percentage grade; they try to form an estimate of the applicant's general information and intelligence, and, if possible, of his character.

It would seem that this method might be very useful in connection with others in this difficult work of selection.

(3) A psychological test has been proposed and questions for the determination of general intelligence have been prepared and examinations given. It is too early however to forecast the value of this method.

(4) A limit may be set on the number to be admitted and admissions up to this limit may be made in the order in which satisfactory candidates apply. This would result in a waiting list.

In judging character it would be possible to require certification from responsible persons who know the applicant well; but there would be wide variation of character standards among the references, and almost a certainty of favorable prejudice.

It would of course be possible to admit a certain number beyond the limit fixed, and after one term's opportunity for judgment, to drop those who by reason of character or scholarship have shown themselves unfit. This method would result in serious trouble for those who judged the students, especially in the matter of character.

It is clear that this is a complex problem, but it is a problem that presses for solution; in fact a solution must be found. It is gratifying to know that a committee of the general Faculty has been appointed to study the problem for the entire University.

During the past year, in anticipation of the unification of all engineering into a single college in October, 1921, a committee drawn from the Faculties of the two Colleges has made a careful study of curricula of the best technical schools, and has been able to plan a course for the first-year students that shall be common to the three divisions of the combined College, Civil, Mechanical, and Electrical Engineering. This course will become operative for all students in engineering entering in October, 1920, and thus the work of unification of the Colleges will be anticipated by a year.

Since this is my last report of Sibley College, I wish to express to you, Sir, my heartfelt appreciation of your attitude toward the work of the College during the sixteen years that it has been in my charge. You have always understood quickly and clearly the problems of the College, whether of education or engineering; you have always supported every just request or demand that we have made through you to the Trustees; you have dealt with all the Colleges of the University with justice and without favor, and a large part of the success of Sibley College during these years is due to your understanding helpfulness.

Respectfully submitted,

ALBERT W. SMITH,

Dean of the Sibley College of Mechanical Engineering.

APPENDIX XII

REPORT OF THE ADMINISTRATIVE BOARD OF THE SUMMER SESSION

To the President of the University:

SIR: As the Administrative Board of the Summer Session we have the honor to submit the following report of the twenty-eighth Summer Session, July 5 to August 15, 1919.

Owing to illness in the autumn of 1918, Professor George P. Bristol withdrew from the directorship of the Summer Session, a position which he had admirably filled during thirteen years of untiring and efficient service. The University Faculty thereupon empowered the President to name a committee to consider the future of the Summer Session and to recommend plans for its continuance. This committee of nine members presented on December 11, 1918, a report which the Faculty adopted and which, with slight modifications, the Committee on General Administration of the Board of Trustees on December 14 in turn adopted for the Summer Session of 1919. In conformity with this action and by appointments thereby authorized, the Summer Session has been carried on by an Administrative Board of five members: Professor J. E. Creighton as Dean of the Graduate School, Professor Frank Thilly as Dean of the College of Arts and Sciences, Professor D. S. Kimball, representing the professional colleges, Professor R. M. Ogden, chairman of the Board, and Professor B. S. Monroe, secretary, the chairman and the secretary constituting the Board's executive committee.

Subsequently the General Committee of the Trustees directed that in the summer of 1919 there be combined with the established Summer Session a special concurrent summer term in the College of Arts and Sciences, and made provision for such additional courses of instruction as might in consequence be feasible.

As in the past, the courses given in the six weeks' Summer School of Agriculture have been under the direction of Dean Mann of the College of Agriculture, the details of arrangement being in the hands of Professor George A. Works.

The teaching staff in the Summer Session, including 57 in the Summer School of Agriculture, numbered 169. The total enrollment of students was 2174, distributed as follows:

Summer Session, including Summer Term in Arts and Sciences	1357
Summer Session and Graduate School	73
Summer Session and Sibley College	243
Summer Session and Civil Engineering	85
Summer Session and Architecture	11
Summer Session and Medicine	2
Summer School of Agriculture	403
Total	2174

In addition, there were enrolled in various schools and colleges 372 students who did not register in the Summer Session; whence a grand total of 2546 persons pursuing work at the University during the course of the summer.

A large enrollment was expected in consequence of the return of students from Government service and of the opportunities which the University made possible by summer terms in all the colleges. The increase was most marked in French, English, History and Economics, Mathematics, Chemistry, Geology and Geography, and in Music. The larger registration was thus in some measure due to circumstances that will not recur; yet the increasing attendance of teachers, of students from other colleges, especially those in which there are no summer terms, and of Cornell students who wish to make some scholastic use of the long vacation, gives promise of the usual growth that has attended the Summer Session in normal years. For such growth the Administrative Board is making provision in its plans for 1920. In thus estimating the prospects of the Summer Session, with a conviction, still not felt in some quarters, of the importance of the work done in the summer months both in courses for secondary teachers and in graduate as well as in undergraduate study; and with a sense of the advantages to the University in drawing to it serious students even for a short period, the Board is adhering as far as is feasible to the provisions of the Statutes that, on the one hand, "the primary object of such Summer Session shall be to furnish instruction to teachers in high schools and academies" without excluding instruction for "university students and others who are qualified;" and that, on the other hand, "instruction in the Summer Session shall be of university grade and in general shall be entrusted to professors and not to subordinate members of the Faculty." Furthermore, in accordance with resolutions approved by the University Faculty and by the Board of Trustees with reference to more ample opportunities for graduate work during the summer, the Summer Session is co-operating with the Graduate School in the promotion of advanced study, aiming to increase both the scope of the work on the part of the various collegiate departments and the number of properly qualified persons who may enter the University during the summer for advanced study and research. Special notice of summer opportunities for graduate study and of the University's facilities for independent investigation was given in a circular issued by the Graduate School in March, 1919.

Throughout the Summer Session services were held each Sunday in the chapel by preachers invited to the University on the Dean Sage Foundation. Such services had been only occasional in previous summers. The Monday evening lectures, all well attended, were opened by the President of the University and continued by Dr. Henry Van Dyke of Princeton, Dr. Newell Dwight Hillis of Brooklyn, the Rev. Gilbert Reid, lately returned from China, Dr. Samuel S. Marquis of Detroit, and Professor Raymond G. Gettell of Amherst College. There were, besides, the usual departmental talks and conferences, musical recitals and concerts, and excursions conducted by the Department of Geography. At the close of instruction examinations for teachers' certificates were held by the State Department of Education. Though perhaps not properly within the scope of this report, it may be stated as a matter of record that, since the various colleges were carrying on special terms, the activities of the campus, except for athletics and student publications, were, during July and August, substantially those of the academic year.

We have met with few difficulties of administration. Inheriting the organization of Professor Bristol, profiting by his advice and that of the Registrar, and enjoying the good will and helpfulness of the teaching staff, we have found the direction of the Summer Session by no means irksome.

The most pressing problem is the social problem. As long as Sage and Prudence Risley Halls furnish insufficient housing for women and as long, therefore, as women must seek accommodations in private houses, there must be less control over them than during regular sessions of the University. Fortunately, many if not most of those who live in the so-called "outside houses" are women of maturity and experience who do not need control in the usual academic sense. There must always, however, be some, the number far from negligible, who need such advice and guidance as the University is careful to provide for its regular women students. The question, we feel, is not properly a question for the Administrative Board charged with the educational direction of the Summer Session, to solve. The solution rests rather with the administrative authorities of the University. We accordingly recommend that all matters of residence and government of women in the Summer Session be placed under the direction of the Adviser of Women, the Medical Adviser, and the Wardens of the residential halls, who may thus serve the women attending the Summer Session as they now serve the women attending other sessions, their authority and obligations, like those of other administrative officers, continuing throughout the year. We recommend also that the expenses of this service, like the expenses of the deans' offices, be borne by the University and not charged against the budget of the Summer Session.

Respectfully submitted,
 Administrative Board of the Summer Session,
 R. M. OGDEN, Chairman,
 B. S. MONROE, Secretary.

APPENDIX XIII

REPORT OF THE ADVISER OF WOMEN

To the President of the University:

SIR: I have the honor to submit the following report for the year 1919-1920.

REGISTRATION

The registration of women for the year 1919-1920 as shown by Colleges was as follows:

Arts	621
Agriculture	73
Graduate School	67
Law	11
Mechanical Engineering	7
Civil Engineering	5
Architecture	14
Medicine (Ithaca)	17
Medicine (New York City)	40
Total	1155
Duplicates	19
Total for year	1136

REPORT OF THE ADVISER OF WOMEN

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The total attendance of women for the year, excluding duplicates, was 1136, an increase of 223 over the preceding year. The total registration in Ithaca was 1096. The subjoined table shows the attendance of women students during the past five years and also the distribution among Colleges.

Year	Arts	Ag.	Grad.	Law	C.E.	M.E.	Arch.	Med.	Total	Dupl.	Net
1915-16	345	290	73	7	—	1	3	27	746	13	733
1916-17	386	299	66	10	—	2	7	32	802	15	787
1917-18	434	310	53	14	1	4	8	42	866	20	846
1918-19	493	291	65	11	1	6	10	50	927	14	913
1919-20	621	373	67	11	5	7	14	57	1155	19	1136

REGISTRATION OF WOMEN FOR THE YEAR 1919-1920 AS SHOWN BY COLLEGES AND CLASSES

Class	Arts	Agr.	Med.	M.E.	C.E.	Arch.	Law	Grad.	Total
1920	97	64	—	—	1	3	3	—	168
1921	130	75	—	2	1	—	4	—	212
1922	163	63	—	3	2	3	4	—	238
1923	216	123	17	1	1	4	—	—	362
1924	9	10	—	1	—	2	—	—	22
Spec	6	38	—	—	—	2	—	—	46
Grad.	—	—	—	—	—	—	—	67	67
Med. N. Y.	—	—	40	—	—	—	—	—	40
Total	621	373	57	7	5	14	11	67	1155
Duplicates	—	—	—	—	—	—	—	—	19
Total registration	—	—	—	—	—	—	—	—	1136

HOUSING

The unprecedented increase in the number of women registered in the University made the problem of housing those who could not be accommodated in the Residential Halls exceedingly difficult.

REGISTRATION OF WOMEN FOR THE YEAR 1919-1920 AS SHOWN BY RESIDENCE

	First Semester	Per Cent	Second Semester	Per Cent
Sage College and Sill House	196	17.25	197	17.34
Prudence Risley and Cottage	167	14.70	157	13.82
Total in Halls	363	31.95	354	31.16
At home	93	8.19	96	8.45
Working for room and board	33	2.91	32	2.82
Approved Houses	250	22.00	230	20.25
Special arrangement	137	12.06	110	9.68
Sorority Houses	158	13.91	150	13.20
New York City (Medical)	40	3.52	40	3.52
Total outside Halls	711	62.59	658	57.92
Total for semester	1074	94.54	1012	89.08
Withdrew, second semester	—	—	124	10.92
Entered, second semester	62	5.46	—	—
	1136	100.00	1136	100.00

The Table shows that less than thirty-two per cent of the young women who registered in the University for 1919-1920 could be accommodated in the Residential Halls and that—excluding those who were living in their own homes, those who had secured places to work for room and board in private families, and those who were provided for in Sorority Houses—there were nearly four hundred women to be housed in Approved Houses or, by special arrangement, in private homes in Ithaca.

The problem of finding suitable places for these four hundred young women was complicated by the fact that a large number of them applied for admission to the University within one or two weeks of the opening of college; many of them arriving in Ithaca without having previously made arrangements for admission. To meet the emergency, it was necessary to place cots in the Residential Halls until adjustments could be made, and find and furnish rooms in houses undesirably remote from the University. The irregularities attendant upon this unsettled period retarded, to a marked degree, the assimilation of the large entering class in University life and work, and made action that would prevent a possible repetition of the condition another year seem imperative.

The decision of the Board of Trustees to limit the number of women to those who can be housed in a reasonably satisfactory manner provides, "That, for the year 1920-1921, only those undergraduate women be admitted to the University who make formal application and deposit with the Treasurer of the University the sum of \$10 on or before September first, except in cases where special permission may be granted to a student by the College in which she wishes to register, should the College, after consultation with the Adviser of Women, find that suitable accommodations are available." This should do much, not only to simplify the housing problem but to adjust the entering students more quickly to their work.

But the relief can, at best, be only partial and temporary and I wish again to emphasize the very urgent and immediate need of more Residential Halls for women.

In order to utilize the two Residential Halls to the fullest extent, the University is arranging to use the houses at 7 South Avenue and 3 East Avenue, in addition to the one at 5 East Avenue which has been occupied by young women for two years, as annexes to Sage College, and the house at 332 Wait Avenue, in addition to Risley Cottage, as an annex to Prudence Risley Hall.

The authorization by the Board of Trustees of the use of a large room at the west end of Cascadilla Hall as a dining room to accommodate 100 young women has made possible the formation of a group of Approved Houses near Cascadilla. It is hoped that this grouping of houses around a common center may assist, to some extent, in establishing helpful points of contact between the new students and the upperclass students of the University, and in giving the new students a greater share in the life of the University. But these arrangements to meet our needs should, I believe, be regarded as expedients only.

SELF-SUPPORTING STUDENTS

During the past year a large number of the young women have been partially, or wholly, self-supporting.

REPORT OF THE ADVISER OF WOMEN

LIX

CLASSIFICATION OF WOMEN STUDENTS WHO HAVE DONE REMUNERATIVE WORK DURING THE YEAR 1919-1920

	First Semester	Second Semester
Instructors	15	16
Housework and care of children, by hour	69	71
Stenography and clerical work	27	23
Stewardesses	6	6
Waiting on table in dormitories	56	52
Waiting on table in sororities	6	7
Working in cafeterias	18	15
Working for room and board in private families	33	32
Total for semester	230	222

VOCATIONAL GUIDANCE

The work of vocational guidance for women has this year centered around the Fourth Intercollegiate Conference on Vocations for Women, which was held here March 5-6, at the invitation of the Self Government Association of the Women of Cornell University.

The meetings were fruitful of much discussion among our students and established helpful connections between the seniors who were interested in entering less standardized vocations and the women who had already been successful in them.

It is noteworthy that, following a few years of emphasis on vocations other than teaching, there seems this year to have been a renewed interest in teaching as a profession among the women of the graduating class, and only those who have felt that their main interest did not lie in teaching, have been seeking positions in the newer fields of work.

WARDEN OF SAGE COLLEGE

The position of Warden of Sage College, which was made vacant by the resignation of Mrs. Elizabeth Barbour, has been held during the past year by Miss Grace Seely, Cornell, 1904. After graduation, Miss Seely returned to the University for graduate work and was, for a time, in charge of Sage Cottage. During this year of readjustments, Miss Seely's knowledge of the University and her ability and judgment in meeting new problems have been most helpful.

The year has been marked by few definite changes in the work of the women's student organizations or in the relation of the young women to the life of the University. It has shown, rather, the characteristics of a period of transition, with elements of restlessness, enthusiasm, idealism, intolerance and reactionary desire for stability, which have stimulated discussion and efforts to formulate new and better standards for work and for all other student activities.

Respectfully submitted,
GEORGIA L. WHITE,
Adviser of Women.

APPENDIX XIV

REPORT OF THE REGISTRAR

To the President of the University:

SIR: I have the honor to submit herewith my twenty-fourth annual report as Registrar of the University. The report covers the academic year 1919-1920, including the Summer Session of 1919.

	THE YEAR				
	Days in Session	Sun- days	Holi- days	Vaca- tion	Total
First term, Sept. 29-Feb. 11	104	16	1	..	121
Christmas vacation, Dec. 21-Jan. 4 .....	..	..	..	16	16
First term, vacation, Feb. 12, 13 .....	..	..	..	2	2
Second term, Feb. 14-June 23	106	18	..	..	124
Spring vacation, Mar. 31-Apr. 6 .....	..	..	..	6	6
Summer vacation, June 24-July 2 .....	..	..	..	9	9
Summer Session, July 3-Aug. 13	36	6	..	..	42
Summer vacation, Aug. 14-Sept. 27 .....	..	..	..	44	44

STUDENTS

The table given on page lxiii, which shows the attendance for 1919-1920, gives the number of students who have received instruction this year, including those in the 1919 Summer Session, in the 1919 Summer School in Agriculture, in the 1919 Fourth Terms in the Graduate School, Agriculture, Medicine, Architecture, Civil Engineering, Mechanical Engineering, those registered up to July 1, 1920, in the Third Term Graduate work, in the 1919-1920 Winter Courses in Agriculture, and the 1920 Third Term in Agriculture and Graduate School, but excluding duplicates, as 7711.

The accompanying table shows the attendance in each course since the opening of the University in 1868.

MATRICULATES

The following table shows that 2943 students have registered during the present year for the first time. The table also shows the method of admission. Students entering for the first time in the Summer Session and in the Summer School in Agriculture are not considered as matriculates, but for convenience are listed in this table.

Graduates	123	Medical (N. Y. City)	140
Advanced standing	401	Summer Session (1919)	653
Regents' credentials	575	Summer School in Agr. (1919) ..	213
School certificates	636	Summer Grad. after July 1, 1919	49
By examination	12	3d Term Agr. to July 1, 1920	4
As special students	94	3d Term Graduate to July 1, 1920	11
Coll. Ent. Board Exams.	31	Summer Grad. to July 1, 1920 ...	1
Total			2943

The small number entering by some of the methods mentioned above is due to the fact that two or more methods have been combined in a single case, the student, however, being listed in the group to which the major portion of his entrance belongs.

ADMISSION FROM OTHER COLLEGES AND UNIVERSITIES

The Registrar has charge of all credentials presented by applicants coming from other institutions. This system has given uniformity of action on similar certificates when the applicants enter different colleges at this University.

In the following lists should be included properly a number of cases of special students, who coming from other colleges, would have been eligible for admission to advanced standing. Such students, however, preferred to be admitted as specials. Some later changed to a regular course but are not included in these tables.

The number of students admitted to advanced standing as candidates for the first degree during the past thirty-four years, is, as nearly as may be ascertained, as follows: The former courses in Chemistry, Pharmacy, Medical Preparatory, and Optional have been omitted from the table but the numbers have been retained in the totals.

Year	Arts	Phil.	Let.	Sci.	Agri.	Civil Arch.	Mech. Eng.	For- estry	Law*	Vet.	Med.	No. of Cases
1886-87	2	8	1	4	1	4	6	18	..	..	..	50
1887-88	6	4	1	1	..	..	11	10	..	..	..	37
1888-89	5	..	6	6	1	2	12	21	..	..	..	58
1889-90	4	5	6	3	2	1	2	25	..	..	..	50
1890-91	8	8	2	4	1	..	14	28	..	..	..	65
1891-92	7	9	2	5	2	2	10	52	..	..	..	89
1892-93	6	6	1	8	..	6	11	44	..	..	..	87
1893-94	5	6	5	8	..	6	6	56	..	..	..	94
1894-95	4	2	3	3	2	3	6	44	..	..	..	71
1895-96	5	11	4	7	3	3	9	33	..	..	..	85
1896-97	10	4	2	4	3	3	11	42	..	12	5	100
1897-98	11	6	..	7	9	2	15	41	..	15	1	108
1898-99	27	6	1	7	5	3	16	56	2	6	3	134
1899-00	28	..	..	1	5	3	25	64	1	7	4	138
1900-01	37	..	..	..	4	6	6	64	3	10	2	134
1901-02	38	..	..	..	6	2	29	92	5	7	..	184
1902-03	33	..	..	..	8	2	24	105	9	12	1	194
1903-04	31	..	..	..	9	5	39	112	..	9	1	207
1904-05	29	..	..	..	9	5	44	101	..	3	..	191
1905-06	39	..	..	..	14	8	36	89	..	1	..	187
1906-07	40	..	..	..	19	5	55	86	..	15	..	220
1907-08	43	..	..	..	22	10	60	79	..	11	..	225
1908-09	37	..	..	..	21	10	53	71	..	5	1	203
1909-10	47	..	..	..	41	7	30	88	..	9	..	222
1910-11	41	..	..	..	44	8	44	47	..	11	..	195
1911-12	36	..	..	..	52	6	38	57	..	7	4	200
1912-13	57	..	..	..	76	8	39	44	..	7	1	232
1913-14	58	..	..	..	76	5	31	47	..	7	..	224
1914-15	70	..	..	..	87	5	42	51	..	7	1	269
1915-16	85	..	..	..	94	7	22	53	..	9	4	282
1916-17	76	..	..	..	84	9	19	54	..	9	2	263
1917-18	64	..	..	..	45	3	19	31	..	12	2	180
1918-19	87	..	..	..	52	3	24	55	..	11	6	244
1919-20	126	..	..	..	102	8	47	99	..	9	2	401

*No data prior to 1896-1897.

Of the 401 admitted in 1919-1920, 181 registered as freshmen, 130 as sophomores, 64 as juniors, and 26 as seniors.

During the last thirty-four years there have been admitted from 500 other institutions of collegiate rank, 5,623 students. The distribution of these students can be seen by reference to the table on page xciii of the Report for the year 1907-1908.

ADMISSION ON SCHOOL CERTIFICATE, REGENTS' CREDENTIALS, AND EXAMINATIONS

The Registrar has charge of the credentials of those entering by school certificate, by Regents' credentials, and by examinations, including the examinations conducted by the College Entrance Examination Board.

During the last sixteen years the number of applicants admitted by school certificate, by Regents' credentials, and by examinations, has been as follows:

	'04-5	'05-6	'06-7	'07-8	'08-9	'09-10	'10-11	'11-12	'12-13	'13-14	'14-15	'15-16	'16-17	'17-18	'18-19	'19-20
Certificate	317	380	324	465	578	574	524	517	601	587	647	683	605	524	648	636
Regents	238	233	185	244	287	329	311	420	404	476	494	520	544	476	649	575
Examination . . .	27	18	18	41	12	14	8	12	11	6	9	28	9	7	4	12
Coll.Ent.Exam.Bd	27	29	37	33	23	27	14	18	13	14	27	7	13	20	22	31
N.Y.C. Ex. . . . .	..	..	29	9	5	..	..	..	..	..	..	..	..	..	..	..
Total	609	658	584	792	905	944	857	967	1029	1083	1177	1238	1171	1027	1323	1254

DEGREES

The inserted table gives the number admitted to graduation. Since June 1911, degrees have been conferred in September, in February, and in June. These have been listed in a single column for each academic year but for any particular year see report for that year. One degree (M.D.) was conferred in 1899, but in 1907 was revoked because the candidate declined to accept it. One degree (D.V.M) was conferred in June, 1905, but owing to a technicality was withdrawn and conferred again in June, 1906, while another degree (D.V.M) was conferred in 1907 but dated as June, 1906. The two degrees (M.D.) listed as February, 1912, were conferred after June, 1911, and before February, 1912, at the dates when the candidates became of proper age. On account of war conditions 17 degrees were conferred on May 1, 1917, and one as of June, 1916. In September, 1917, one A.B. degree and eleven B.S. degrees were conferred as of June 27, 1917. In January, 1918, three M.E. degrees were conferred as of June 27, 1917, and one M.E. as of September 26, 1917. In October, 1918, one degree in Arts, one degree in Chemistry, and three degrees in Mechanical Engineering were conferred as of May 22, 1918, one in Mechanical Engineering was conferred as of September 26, 1917, and one in Civil Engineering was conferred as of October 11, 1916. Care has been taken to discriminate between closely allied degrees, but such have been grouped so as to show at a glance the number in each department.

Respectfully submitted,

DAVID F. HOV,
Registrar.

ATTENDANCE FOR THE YEAR 1919-1920

DEPT. & COLL. DEGREES CLASSIFICATION	GRADUATE A.M., Ph.D., M.M.E., Etc.			ARTS AND SCIENCES A.B., B.Chem.			LAW LL.B.			MEDICINE M.D.			AGRICULTURE B.S.			VETERINARY D.V.M.		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Graduates	340	67	407	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class of 1924	...	...	...	26	11	37	2	...	2	...	...	25	9	34	2	...	2	
Class of 1923	...	...	...	352	217	569	2	...	94	19	113	248	122	370	34	...	34	
Class of 1922	...	...	...	283	166	449	74	4	78	38	14	52	180	65	245	21	...	21
Class of 1921	...	...	...	271	128	399	53	5	58	42	6	48	183	76	259	18	...	18
Class of 1920	...	...	...	244	95	339	34	3	37	36	14	50	227	60	287	28	...	28
Specials	...	...	...	14	5	19	1	...	82	4	86	52	36	88	...	...	...
Totals	340	67	407	1190	622	1812	166	12	178	292	57	349	915	368	1283	103	...	103
Duplicates	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Net Totals	340	67	407	1190	622	1812	166	12	178	292	57	349	915	368	1283	103	...	103
Summer to July 1, 1920	8	1	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fourth Term (1919)	123	45	168	...	...	...	...	...	...	5	1	6	91	7	98	...	...	...
Third Term, 1920	55	8	63	...	...	...	...	...	...	...	...	32	7	39	...	...	...
Winter Agr.	...	...	...	...	...	...	...	...	...	...	...	339	57	396	...	...	...
Summer (1919)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	526	121	647	1190	622	1812	166	12	178	297	58	355	1377	439	1816	103	...	103
Duplicates	117	40	157	...	...	...	...	...	...	3	...	3	94	17	111	...	...	...
Net Totals	400	81	490	1190	622	1812	166	12	178	294	58	352	1283	422	1705	103	...	103
DEPT. & COLL. DEGREES CLASSIFICATION	ARCHITECTURE B.Arch.			CIVIL ENG. C.E.			MECH. ENG. M.E.			SUMMER SESSION 1919			SUMMER SCHOOL IN AGR. 1919			TOTAL		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Graduates	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	340	67	407
Class of 1924	12	2	14	30	...	30	109	1	110	...	...	...	...	...	...	206	23	229
Class of 1923	24	4	28	101	1	102	376	2	378	...	...	...	...	...	...	1231	365	1596
Class of 1922	13	3	16	103	2	105	354	2	356	...	...	...	...	...	...	1066	256	1322
Class of 1921	26	...	26	84	1	85	210	2	212	...	...	...	...	...	...	887	218	1105
Class of 1920	36	3	39	80	1	81	140	...	140	...	...	...	...	...	...	825	176	1001
Specials	5	2	7	...	...	...	14	...	14	...	...	...	...	...	...	168	47	215
Totals	116	14	130	398	5	403	1203	7	1210	...	...	...	...	...	...	4723	1152	5875
Duplicates	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	85	25	110
Net Totals	116	14	130	398	5	403	1203	7	1210	...	...	...	...	...	...	4638	1127	5765
Summer to July 1, 1920	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	1	9
Fourth Term (1919)	37	4	41	134	4	138	362	2	364	...	...	...	...	...	...	752	63	815
Third Term, 1920	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	87	15	102
Winter Agr.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	339	57	396
Summer (1919)	...	...	...	...	...	...	...	...	...	991	782	1773*	134	356	490*	1125	1138	2263
Totals	153	18	171	532	9	541	1565	9	1574	991	782	1773*	134	356	490*	6949	2401	9350*
Duplicates	43	2	45	126	3	129	331	2	333	654	68	722	21	26	47	1380	158	1547
Net Totals	110	16	126	406	6	412	1234	7	1241	337	714	1051	113	330	443	5535	2176	7711

*Includes 92 (25 men, 67 women) registered in both Summer Session and Summer School in Agriculture.

†Excludes 110 duplicates of regular session.

††Excludes 110 duplicates of regular session and 92 registered in Summer Session and Summer School in Agriculture.

APPENDIX XV

REPORT OF THE LIBRARIAN

To the President of the University:

SIR: As librarian of Cornell University, I respectfully submit the annual report of the condition of the library building and its contents, of the additions made, and the work done during the year to facilitate the use of books and manuscripts under the supervision of the library.

With the return of more normal conditions in the whole University, the library also has shown increased activity, both in the receipt of materials and the use made of these. The opening up of the German book markets to the world has enabled us to resume our purchases in that quarter, not under normal conditions but in a way to enable us to secure things most desired. The terms that have been made by the German booksellers, whereby they have not only increased the price of their books, which was to be expected, but have also artificially increased the selling price of the mark, have caused more or less irritation in the whole American library world, and have curtailed the purchases to some extent.

The growth of the library has made the crowding of the book shelves in the stacks necessary, until the need for added shelving has become acute. The provision already made for one additional floor, with some supplementary shelving elsewhere about the stacks, will relieve the pressure somewhat, but not for long. The need for greater storage and reading space has reached the point where an addition to the building must be seriously considered within the next two or three years, and plans for such additions should be under way.

The library staff has suffered less from depletion than many large library staffs during the war period, when the demand for workers with library training far exceeded the supply. We lost Miss Ayres, supervisor of the catalogue, who gave up her work for personal reasons, but the library was fortunate in having a trained worker in Miss Emma Speed to fill the position. Two minor positions are still unfilled by appointment, the work being done by assistants by the hour, until regular assistants can be found or trained to do it.

The completion of the accessioning of the Charles William Wason Collection of books on China and the Chinese, shows the collection to number more items than at first estimated, the total number as shown by the tabulated report being 9399.

The library has received from Mrs. Sarah L. Kuichling of Rochester, N. Y. for the use of the College of Civil Engineering, the valuable library of her husband Emil Kuichling, dealing with hydraulics and sanitary engineering. The collection numbers 2079 volumes and pamphlets. A small endowment for future growth accompanies the gift.

From Mrs. R. A. Harris, the library has received the mathematical books of Professor R. A. Harris for the use of the mathematical Faculty of the University. As yet these have not been accessioned and the exact number in the collection cannot be stated.

The books belonging to Professor G. F. Atkinson's private library have been given to the University by Mrs. Atkinson and son, Kerr Atkinson, to be incorporated as a part of the general library, in so far as they are not already in the library. This will strengthen the library resources in the field of cryptogamic botany, in which Professor Atkinson worked primarily.

Mrs. A. D. White has supplemented the many gifts of books heretofore received, by a large number that had been held in the president's house. Some of these made up a special collection numbering over 600 volumes for the use of Prudence Risley Hall and the others were incorporated in the general library.

Judge George J. Tansey, '88, sent to the library a facsimile copy of the Kil-marnock edition of the poems of Robert Burns, privately printed.

The library has been enriched by the many gifts of books that have been given by you, Mr. President, and through your generosity has been able to add to the gifts already made to the Louvain University Library, the books belonging to your philosophical library.

From the editors of the Philosophical Review the library has received many valuable additions during the past year, as in years before.

As usual, two courses of lectures have been given by the Librarian, continuing throughout the year, dealing with the history of book making and applied bibliography.

ACCESSIONS DIVISION

The general library has added during the year 22,414 volumes, which include the Wason Collection, which had not heretofore been accessioned. Besides this collection, which was the gift of Charles William Wason, 4187 additional volumes have been given to the library, not including the Harris and Atkinson collections, not yet accessioned, and 8828 have been purchased.

BOOKS, BOUND PAMPHLETS, MAPS, MSS., ETC.

	Vols.	
General library, exclusive of the following	433,053	
Anthon collection, purchased 1868	6,770	
Bopp collection, purchased 1868	2,014	
Sparks collection, purchased 1872	5,717	
White Historical library, gift 1891	23,177	
Zarneke collection, gift 1893	13,000	
British Patents, gift 1868	3 108	
		486,839
Fiske Dante collection, gift 1893	8,309	
Fiske Petrarch collection, gift 1905	4,081	
Fiske Icelandic collection, gift 1905	15,522	
Wason collection, gift 1918	9,399	
Emil Kuichling collection, gift 1919	2,093	
Volumes of Cornell University Theses (deposited)	6,611	
Philological Seminary collection	1,076	
Philosophical Seminary collection	816	
German Seminary collection	766	
French Seminary collection	28	
Latin Seminary collection	327	
American History Seminary collection	603	
		49,631

Maps in the library	983	
Cornell University plans deposited in the library	197	
U. S. Coast Survey charts	960	
U. S. Geological Survey Topographical sheets	2,304	
U. S. Geological Survey atlases	210	
British Geol. Survey maps	600	
	<hr/>	5,254
Manuscripts	643	
	<hr/>	643
General law library, gifts and purchases	40,849	
Moak law library, gift 1893	12,500	
Flower Veterinary library, gift	5,726	
Barnes reference library, gift	2,402	
Goldwin Smith Hall library	2,467	
Stimson Hall library	1,463	
Evans mathematical library	417	
Comstock Memorial collection	469	
Architectural College library	1,162	
Economic Laboratory collection	339	
Entomological collection	2,403	
Prudence Risley Hall collection	694	
	<hr/>	70,891
N. Y. State Agricultural College library	15,810	
N. Y. State Forestry library	1,181	
N. Y. State plant pathology collection	388	
	<hr/>	17,379
Total books, maps, mss., etc.		630,637

IMPORTANT ADDITIONS TO THE LIBRARY 1919-1920

Periodicals added by purchase:

- Revue critique de paléozoologie. 22 vols.
- New Zealand Institute. Transactions and Proceedings. 39 vols.
- Bombay Natural History Society. Journal. 24 vols.
- Rassegna critica della letteratura italiana. 22 vols.
- Revue suisse de zoologie. 25 vols.
- R. Istituto botanico dell' Università di Pavia. Atti. 16 vols.
- Société Linnéene de Bordeaux. Actes. 69 vols.
- Pomological magazine. 3 vols.
- La nature. 1873-1917.
- Manchester Literary and Philosophical Society. Memoirs and Proceedings. 1785-1918.
- Societas pro fauna et flora fennica. 32 vols.
- Monitore zoologico italiano. 29 vols.
- Revue scientifique du Bourbonnaise. 26 vols.
- Country life illustrated. 34 vols.
- Revue d'histoire ecclésiastique. 13 vols.
- Jewish quarterly review. 9 vols.
- Revue zoologique africaine. 7 vols.
- Poetry. 15 vols.
- Revue du droit public. 1894-1916.
- Archaeologia Cantiana. 28 vols.
- Bergscher Geschichtsverein. Zeitschrift. 38 vols.
- Baltische Studien. 59 vols.
- Sociological review. 11 vols.
- Verein für die Geschichte von Ost-und Westpreussen. Publications. 30 vols.
- Verein für Thüringische Geschichte. Zeitschrift. 27 vols.
- Verein für Mecklenburgische. Geschichte. Jahrbücher. 76 vols.
- Oberbayerisches archiv. 55 vols.

Zeitschrift für die gesammte lutherische Theologie. 39 vols.
 Oriens Christianus. 16 vols.
 Forschungen zur christlichen Litteratur. 13 vols.

Periodicals added by gift:

Cincinnati price current. 117 vols. Gift of Mrs. C. M. Waddell.
 Daily interocean. 1880-1898. Gift of Chicago Board of Trade.

Periodical sets completed:

Gentleman's magazine. 1876-1905.
 Nordisk Tidskrift. 1878-1908.
 Linschoten Vereeniging. Werken. 1912-1918.

Books added by purchase:

Voyage de "La Bonite." 19 vols.
 Voyage de l'"Astrolabe." 20 vols.
 Novara Expedition. 14 vols.
 Semon. Zoologische Forschungsreisen in Australien. 12 vols.
 Chenu. Encyclopédie d'histoire naturelle. 15 vols.
 Donovan. Natural history of British insects. 13 vols.
 Guevara. Diall of princes, translated by T. North. 1557.
 Moore. Lepidoptera of Ceylon. 3 vols.
 Moore. Lepidoptera Indica. 10 vols.
 Rippon. Icones ornithopterorum.
 Hewitson. Exotic butterflies. 5 vols.
 Hall. Horae vacivae. 1646.
 Blundeville. His exercises. 1597.
 Daniel, S. Poems. 1605.
 Studi e testi. 32 vols.
 Deutsche Texte des Mittelalters. 25 vols.
 Cambridge University. Catalogues of manuscripts. 22 vols.
 Bruch. Bryologia Europaea. 6 vols.
 Hanserecesse. 24 vols.
 Siboga Expeditie. 54 vols.
 Nova Guinea. 21 vols.
 British Record Society. Index Library. 49 vols.

Books added by gift:

Recueil général des lois, décrets, et arrêtés de France, 1315-1887. Gift of
 J. T. C. Lowe.
 Collection of books on naval history. 485 vols. Gift of B. A. Sinn.
 Miscellaneous books from Mrs. A. D. White. 725 vols.

In addition to the above, the library has made large additions in the field of ancient history, English history, scientific travels, and zoology. There have also been some additions to the history and literature of Latin America, a field in which the library is very deficient.

A list of donors to the library is appended to this report.

PERIODICALS DIVISION

The library has received currently during the year 2366 periodicals, 1218 by subscription and 1148 by gift and exchange. The German and Austrian periodicals that were temporarily interrupted during the war are again coming with fair regularity and the back numbers are being received from time to time, so that the sets bid fair to be finally completed. Many of the foreign periodicals have suspended altogether.

The binding of the periodicals is done by the Periodical Division and during the past year 4692 volumes of periodicals and 1549 books were bound, not including repairs made. Many volumes that formerly were bound abroad before we received them are now coming unbound, and the binding facilities of Ithaca are overtaxed. The only permanent solution of this problem is to establish our own bindery in connection with the library, to facilitate the work and eliminate the fire risk that now attends it.

CATALOGUE DIVISION

The Catalogue Division classifies and catalogues all books received through the Accessions Division, as they are received. The Division has done much extra work this year, because of the large accessions from Mrs. A. D. White and other sources. The Prudence Risley Hall library has been classified by the Library of Congress system, with the assistance of the Readers' Division, under whose supervision it comes.

No. of books and pamphlets catalogued	13,198
No. of maps catalogued.	16
No. of titles added to the catalogue	7,274
No. of written cards added.	15,749
No. of printed cards added.	6,628
No. of cards added to the Library of Congress catalogue deposited in the library	26,688

The Catalogue Division has also prepared the annual list of publications appended to the President's report, consisting of about 650 titles.

READERS DIVISION

The library has been open to users 307 days during the year, and during the period of instruction has remained open six days in the week until 10:30 P. M. The number of registered borrowers during the year was 1622, which does not include those using freely the books and periodicals in the reading and reference rooms.

The recorded use of the library is as follows:

Reading room	119,342
Seminary rooms.	2,940
Laboratories and departments.	5,666
Home use.	35,450
Foreign loans.	207
Borrowed from other libraries.	85

As will be seen by the above table the library has had the largest recorded use thus far in its history, showing gains in every department of use except foreign loans and book reserves.

STACKS DIVISION

The Stacks Division has inventoried during the year all books belonging to the library, which does not include those that are the property of the several colleges and departments, not under library supervision. All books drawn from the library for laboratory and department use and all special collections placed under the supervision of the general library are thus included.

In this inventory many books are found misplaced on the shelves and some are not accounted for, so that at all times there is a list of lost books, many of which are found subsequently or returned. This year the list of lost books has been largely reduced by correction of errors and finding of books that had been misplaced during the war period, when the assistance was not sufficient to do the work carefully.

The crowded condition of the book stacks has necessitated the moving and readjusting of many books in order to preserve at all times the strict order so essential to a much used library. This extra labor is sure to increase until the building is enlarged for future growth.

SPECIAL COLLECTIONS

The special collections having their librarians and curators have made their usual additions. The White Historical library, owing to the favorable opportunity to buy abroad, has made extensive additions to its many series of German, Austrian, French, and Italian publications.

The Icelandic collection has been substantially increased by purchase and exchange. Volume 12 of *Islandica*, the annual publication provided for by Mr. Fiske in connection with this collection, has been published.

The curator of the Dante and Petrarch collections, Miss Mary Fowler, has found it necessary because of ill health to give up her work with this fiscal year. Copy for the supplement to the Dante catalogue is ready for the printer and provision made for printing it, and it is hoped that when the necessary proof reading begins, Miss Fowler will be able to do this work. The inventory of this collection has been cared for this year by the Stacks Division.

DEPARTMENT LIBRARIES

The number of volumes drawn from the general library and deposited in department libraries and laboratory collections, does not increase greatly from year to year. As the older works are superseded by newer ones the older ones are returned to make room. This operates as a natural check and shows that department collections generally speaking may be limited to the books currently needed for work in the department, the little-used literature being stored in the general library.

Volumes deposited in department libraries:

Agriculture	1,804
Architecture	2,175
Chemistry	5,166
Civil Engineering	5,500
Entomology	4,043
Sibley College	2,609
Prudence Risley	694
Hart Memorial library	2,251
Veterinary College	5,726
Goldwin Smith Hall	2,467

Respectfully submitted,
 WILLARD AUSTEN,
 Librarian.

APPENDIX XVI

PUBLICATIONS, 1919-1920

The University Library is gathering a collection of the publications of all Cornellians. These are kept on the shelves in alphabetic order by University classes. Every Cornellian is asked to send to the Library a copy of each publication that he cares to have in such a collection.

Cornell University. Official publications. v. 11. 1919-1920.

Cornell University. Agricultural Experiment Station. Bulletin. No. 400-402. January, 1920-March, 1920. Ithaca, N. Y.

— Memoir. No. 24-30. June, 1919-April, 1920. Ithaca, N. Y.

— Thirty-second annual report of the New York State College of Agriculture at Cornell University and the Agricultural Experiment Station established under the direction of Cornell University, Ithaca, N. Y., 1919. Albany, N. Y., J. B. Lyon Co., 1920. 2v.

Cornell University. Library. Report of the Librarian, 1918-1919. *Cornell University. President. Annual report, 1918-1919, Appendix XVII.*

— Publications, 1918-1919, [by Cornell University and its officers]. *Same, 1918-1919, Appendix XVIII.*

Cornell University. Medical College. Cornell University medical bulletin. v. 8-9. New York, 1918-1920.

— Studies from the Department of Anatomy. v. 7. New York, 1918-1919.

— Studies from the Department of Pathology, Bacteriology, Experimental Pathology and Experimental Therapeutics. v. 11-16. New York, 1911-1918.

New York State College of Agriculture. Thirty-second annual report of the New York State College of Agriculture at Cornell University and the Agricultural Experiment Station established under the direction of Cornell University, Ithaca, N. Y., 1919. Albany, N. Y., J. B. Lyon Co., 1920. 2v.

New York State Veterinary College. Report for the year 1918-1919. Albany, N. Y., J. B. Lyon Co., 1920.

Cornell chemist; published by the Board, under the supervision of the Department of Chemistry at Cornell University, M. L. Nichols, editor. v. 9. November, 1919-April, 1920. Ithaca, N. Y.

Cornell civil engineer; monthly publication of the Association of Civil Engineers at Cornell University. v. 28. October, 1919-June, 1920. Ithaca, N. Y.

Cornell countryman. v. 17. October, 1919-June, 1920. Ithaca, N. Y.

Cornell extension bulletin. No. 34-38. July, 1919-December, 1919. Ithaca, N. Y.

Cornell forester; published annually by the Cornell foresters, Cornell University. v. 1. June, 1920. Ithaca, N. Y.

Cornell junior extension bulletin. No. 3-5. April, 1919-June, 1919. Ithaca, N. Y.

Cornell law quarterly; published by the faculty and students of the Cornell University College of Law. v. 5. November, 1919-May, 1920. Ithaca, N. Y.

Cornell reading course for the farm; D. J. Crosby, supervisor. No. 142-149. February, 1919-September, 1919. Ithaca, N. Y.

Cornell reading course for the home; Martha Van Rensselaer, supervisor. No. 123-132. April, 1919-August, 1919. Ithaca, N. Y.

Cornell rural school leaflet; edited by E. L. Palmer. v. 13. September, 1919-March, 1920.

Cornell studies in English; edited by J. Q. Adams, C. S. Northup, and M. W. Sampson. v. 4-5. 1919-1920. Yale University Press, New Haven, Conn.

Cornell veterinarian; D. H. Udall, editor; E. M. Pickens and C. E. Hayden, acting editors. v. 9. January, 1919-October, 1919. Ithaca, N. Y.

- Islandica**; an annual relating to Iceland and the Fiske Icelandic collection in Cornell University Library. v. 12. By Halldór Hermannsson. Issued by Cornell University Library, Ithaca, N. Y. 1919.
- Journal of physical chemistry**; editor, W. D. Bancroft. v. 23. January, 1919—December, 1919. Ithaca, N. Y.
- Philosophical review**, edited by J. E. Creighton, with the cooperation of James Seth. v. 28. January, 1919—November, 1919. New York, Longmans, Green and Co.
- Sibley journal of engineering**, published by the students of Sibley College. v. 33. October, 1918—December, 1919. Ithaca, N. Y.

Publications by Officers

In the present list are included the titles of books, pamphlets, and contributions to periodicals, transactions, etc., published by officers and fellows of the University during the period extending from July 1, 1919, to June 30, 1920, with some titles omitted in previous lists.

- Adams, J. Q.** The bones of Ben Jonson. *Studies in philology*, v. 16:289, 1919. Reprinted in part in the Philadelphia Public ledger, 27 November, 1919.
- *Reviews*: Massinger, Philip, and Field, Nathaniel. The fatal dowry; edited by Charles L. Lockert, jr. *Journal of English and Germanic philology*, v. 18:641, 1919; Shakespeare, William. The Yale Shakespeare. *Modern language notes*, v. 35:320, 1920.
- co-editor. Cornell studies in English, 1919-1920.
- Alexander, W. P.** Cascadilla. *Nature study review*, v. 16:80, 1920.
- Peter, the story of a pet owl. *Same*, v. 16:133, 1920.
- Song of late autumn. *Cornell countryman*, v. 17, No. 3, Frontispiece, 1919.
- Why spiders are interesting. *Nature study review*, v. 15, No. 8, 1919.
- Allen, A. A.** Bird hunting with a camera. *Outlook* v. 125:257, 1920.
- Birds and trees in winter. *American forestry*, v. 26:45, 1920.
- Christmas birds. *Country life*, v. 37:25, 1919.
- A Christmas walk with birds and beasts. *American forestry*, v. 25:1526, 1919.
- Christmas with the birds. *Bird lore*, v. 21:379, 1919.
- Co-operation. *Same*, v. 22:56, 1920.
- A day with the ducks on Lake Cayuga. *American forestry*, v. 26:238, 1920.
- The gulls and terns. *Same*, v. 25:1291, 1919.
- The herons. *Same*, v. 25:1229, 1919.
- How to build bird houses. *Bird lore*, v. 22:59, 1920.
- Keeping track of the birds. *Same*, v. 22:115, 1920.
- Learning bird songs. *Same*, v. 22:177, 1920.
- The loons and grebes. *American forestry*, v. 25:1419, 1919.
- The return of the birds. *Bird lore*, v. 22:119, 1920.
- Spring on the marshes. *American forestry*, v. 26:279, 1920.
- The voices of birds. *Bird lore*, v. 22:180, 1920.
- Andrews, A. L.** *Dicranoweisia crispula* in the White Mountains. *Rhodora* v. 21:207, 1919.
- Hymenostomum in North America. I. *Bryologist*, v. 23:28, 1920.
- Notes on North American sphagnum. VIII. *Same*, v. 22:45, 1919.
- *Reviews*: Herzog, T. Die Bryophyten meiner zweiten Reise durch Bolivia. *Same*, v. 23:9, 1920; Renauld, F., and Cardot, J. Mousses de Madagascar. *Same*, v. 22:27, 1919.
- Atwood, M. V.** The country newspaper and the community. *Rural manhood*, v. 10:349, 1919; v. 11:7, 1920.
- The country newspaper and its problems. *Ohio newspaper* [Columbus], June, 1920.
- Austen, Willard.** Report of the Librarian, 1918-1919. *Cornell University. Official publications*, v. 10, No. 18, Appendix XVII, 1919.
- Bailey, Harold.** Further observations on the radium treatment of uterine cancer. *American journal of obstetrics*, v. 80, No. 3, 1919. Also in *American Gynecological Society, Transactions*, v. 44, 1919.

- Bancroft, W. D.** Blue eyes and blue feathers. *Scientific American monthly*, v. 1:461, 1920.
- Bubbles, drops and grains. *Same*, v. 1:366, 1920.
- Chareval before the war. I-III. *Journal of physical chemistry*, v. 24:127, 201, 342, 1920.
- The colors of colloids.VIII-XI. *Same*, v. 23:445, 554, 603, 640, 1919.
- Mutual action of soils. *Same*, v. 24:21, 1920.
- Supersaturation and crystal size. *Same*, v. 24:100, 1920.
- Thermal filters. *Same*, v. 24:421, 1920.
- Papers from the laboratory of W. D. Bancroft:
- Argo, W. L., Mathers, F. C., Humiston, B., and Anderson, C. D. The preparation of fluorine. *American Electrochemical Society. Transactions*, v. 35:335, 1919.
- Hood, H. P. and Murdock, H. R. Superpalite. *Journal of physical chemistry*, v. 23:498, 1919.
- Humiston, Burr. Action of fluorine on organic compounds. *Same*, v. 23:572, 1919.
- Argo, W. L., James, E. M., and Donnelly, J. L. Tetrachlordinitroethane. *Same*, v. 23:578, 1919.
- Carrick, Mary-S. Some studies in fondant making. *Same*, v. 23:589, 1919.
- Barnes, F. A.** Why do engineer graduates shun railway jobs? *Railway age*, v. 66, 5 March, 1920.
- *associate editor.* American civil engineers handbook, Section 3: Steam railroads. 4th ed. 1920, p. 158.
- Becker, Carl.** Europe through the eyes of the Middle West. *New Europe*, v. 15:98, 1920.
- John Jay and Peter Van Schaack. *New York State Historical Association. Quarterly journal*, v. 1:1, 1919.
- A little more grape, Captain Bragg. *Nation*, v. 110:260, 1920.
- *Reviews:* Adams, Henry. The degradation of the democratic dogma. *American historical review*, v. 25:480, 1920; Bevan, Edward. German social democracy during the war. *Nation*, v. 109:768, 1919; Deschanel, Paul Gambetta. *Same*, v. 110:479, 1920; Gibbons, H. A. The new map of Asia. *New republic*, v. 20, 26 November, 1919, Pt. 2, p. 26; Haldane, R. B., viscount. Before the war. *Nation*, v. 110:692, 1920; Holt, L. H. and Chilton, A. W. A brief history of Europe from 1789 to 1815. *New republic*, v. 22:322, 1920; The League of Nations. [Review of recent works.] *Nation*, v. 109:225, 1919; Tirpitz, Grand Admiral Alfred P. F. von. My memoirs. *Same*, v. 110:148, 1920; Young, Norwood. The life of Frederick the Great. *New republic*, v. 20:329, 1919.
- Bedell, Frederick.** The air propeller, its working characteristics and theory, together with a brief discussion of the airplane engine and the power available for airplane propulsion. New York, D. Van Nostrand Co., 1919. 96p.
- *managing editor.* Physical review, 1919-1920.
- Benedict, S. R.** The action of radium emanation on the vitamins of yeast, by Kanematsu Sugiura and Stanley R. Benedict. *Journal of biological chemistry*, v. 39:421, 1919.
- The determination of small quantities of sugar in urine, including observations on the polysaccharide content of human urine. *Society for Experimental Biology and Medicine. Proceedings*, 1920.
- The nutritive value of the banana. II. By Kanematsu Sugiura and Stanley R. Benedict. *Journal of biological chemistry*, v. 40:499, 1919.
- On the determination of blood sugar, by Stanley R. Benedict and Elizabeth Franke. *American Society of Biological Chemists. Proceedings*, v. 5, No. 1, 1919.
- Benjamin, E. W.** A study of the inheritance of the size, shape, and color of hens' eggs. *Cornell University. Agricultural Experiment Station. Memoir*, No. 31, 1 May, 1920.
- Wholesale distribution of eggs. *National poultry, butter, and egg bulletin*, v. 4, No. 5, 1920.

- Bennett, C. E.** Cicero's letters. *Encyclopedia Americana*, v. 6:670, 1918
- Germania. *Same*, v. 12:502, 1919.
- Juvenal's satires. *Same*, v. 16:269, 1919.
- Metamorphoses. *Same*, v. 18:705, 1919.
- Orations against Catiline. *Same*, v. 20:731, 1919.
- editor. Caesar, Caius Julius. De bello Gallico, books i-iv, with selections from books v, vi, vii; edited with introduction, notes, and vocabulary. Boston and New York, Allyn & Bacon, 1920. xxxi, 292, 85p.
- Bentley, John, jr.** Forest management, by A. B. Recknagel and John Bentley, jr., New York, John Wiley & Sons, 1919. 269p.
- Municipal forestry in New York. *American forestry*, v. 26:160, 1920.
- Birch, R. R.** Hog cholera. *Cornell reading course for the farm Lesson 150:117*, 1919.
- Bizzell, J. A.** The formation of nitrates in a soil following the growth of red clover and of timothy, by T. L. Lyon, J. A. Bizzell and B. D. Wilson. *Soil science*, v. 9:53, 1920.
- Blodgett, F. M.** Further developments in the work on mosaic and leaf-roll of potatoes. *New York State Potato Association. Proceedings*, v. 6:9, 1919.
- Bogert, G. G.** Courts-martial. criticisms and proposed reforms. *Cornell law quarterly*, v. 5:18, 1919.
- Boyle, J. E.** The benefits of rural motor express to producers and consumers auxiliary to existing transportation system necessary to meet shift of population from rural to urban communities. [Address delivered at Highway Transport Conference, New York City, 1920.] Boyle, J. E., and others. *Rural motor express and its relation to the public*, 1920, p. 1.
- Collective bargaining in agriculture. *American Association for Agricultural Legislation. Bulletin No. 6:35*, 1920.
- The drive against "big biz". *Nation's business*, v. 8, No. 4:24, 1920.
- Solving the problems in the new field. *University of North Dakota. Quarterly journal*, v. 10:329, 1920.
- Boys, J. A.** Candy dolls. *Modern hospital magazine*, v. 13, December, 1919.
- Bretz, J. P.** Reviews: Chafee, Zachariah, jr. Freedom of speech in war time. *Cornell law quarterly*, v. 5:225, 1920; Sutherland, George. Constitutional powers and world affairs. *Same*, v. 4:227, 1919.
- Brew, J. D.** Relation between lactic acid production and bacterial growth in the souring of milk, by J. C. Baker, J. D. Brew, and H. J. Conn. *New York State Agricultural Experiment Station, Geneva, N. Y. Technical bulletin No. 74*, December, 1919.
- Briggs, T. R.** The adsorption of arsenious oxide by metastannic acid, by T. R. Briggs and W. J. Bartlett. *American Electrochemical Society. Transactions*, v. 37:449, 1920.
- Experiments on emulsions. III. *Journal of physical chemistry*, v. 24:120, 1920.
- Experiments on emulsions. IV. By T. R. Briggs, F. R. DuCassé, and L. H. Clark. *Same*, v. 24:147, 1920.
- Note on the liquefaction of gelatin by salts, by T. R. Briggs and Evelyn M. C. Hieber. *Same*, v. 24:74, 1920.
- Broughton, L. N.** Reviews: Dinsmore, C. A. Life of Dante Alighieri. *New republic*, v. 22:425, 1920; Ley, J. W. T. The Dickens circle. *Same*, v. 22:191, 1920; Patton, Julia. The English village, a literary study, 1750-1850. *Journal of English and German philology*, v. 19:125, 1920.
- Browne, A. W.** Behaviour of the hydronitrogens and their derivatives in liquid ammonia. VI. Electrolytic nitridation of various anodes in a solution of ammonium trinitride, by A. W. Browne, M. E. Holmes, and J. S. King. *American Chemical Society. Journal*, v. 41: 1769, 1919.
- Inorganic and physical chemistry. *American year book*, 1919, p. 637; 1918, p. 644; 1917, p. 597.
- Articles based on researches carried out in co-operation with A. W. Browne, and published in *The Journal of the American Chemical Society*: The adsorption of carbon dioxide and ammonia by charcoal, by L. B. Rich-

- ardson, v. 39: 1828, 1917; Thermal decomposition of certain inorganic urinitrides, by A. R. Hitch, v. 40: 1195, 1918; Tetramethyl-ammonium trinitride, by Frank V. Friedlander, v. 40: 1945, 1918.
- Buckman, H. O.** The practical value of the soil survey. *Cornell countryman*, v. 17:453, 1920.
- The teaching of elementary soils. *American Society of Agronomy. Journal*, v. 12, No. 2:55, 1920.
- Burr, G. L.** Loyalty and liberty. [Commencement address at Indiana University, 1919.] *Indiana University alumni quarterly*, July, 1919, p. 309.
- Note: Ancestry of Hon. Andrew Dickson White, LL.D., D.C.L. *New England historical and genealogical register*, v. 73:237, 1919.
- Reviews: Abbott, W. C. Colonel John Scott of Long Island, 1634(?)–1696. *American historical review*, v. 24:704, 1919; Ulrich Zwingli. Zum Gedächtnis der Zürcher Reformation, 1519–1919. *Same*, v. 25:316, 1920.
- Burritt, M. C.** Relation of the lumber merchant to the farmer. *Lumber co-operator*, v. 4, No. 3, 1920.
- A square deal for farmers vital to the welfare of the nation. *Dairymen's league news*, v. 4, No. 6, 1920.
- What should be the relation of the county agent to the farm bureau and of the college to a state farm bureau federation? *Association of American Agricultural Colleges and Experiment Stations. Proceedings of the 33d annual convention*, 1919, p. 274.
- Canon, Helen, supervisor.** Cornell reading course for the home, 1919–1920.
- Carpenter, C. M.** Controlling calf scours. *Cornell veterinarian*, v. 9:135, 1919.
- Researches in the diseases of breeding cattle with observations upon the diseases interfering with reproduction in sheep and swine, by W. L. Williams and C. M. Carpenter. *New York State Veterinary College. Annual report*, 1918–1919, p. 91.
- Researches upon a spirillum associated with abortion in ewes. *Same*, 1918–1919, p. 129.
- White or calf scours, by W. L. Williams, W. A. Hagan, and C. M. Carpenter. *American Veterinary Medical Association. Journal*, v. 57:124, 1920. Also in *Ohio State University Veterinary alumni quarterly*, v. 7:305, 1920.
- Carroll, C. A., translator.** Antonelli, Etienne. Bolshevik Russia; translated from the French by Charles A. Carroll. New York, A. A. Knopf, 1920. 307p.
- Carver, W. B.** A property of permutation groups analogous to multiple transitivity, by W. B. Carver and Mrs. Estella F. King. *American Mathematical Society. Bulletin*, v. 26:319, 1920.
- Trigonometric functions—of what? *American mathematical monthly*, v. 26: 243, 1919.
- Chambers, Robert.** Changes in protoplasmic consistency and their relation to cell division. *Journal of general physiology*, v. 2:49, 1919.
- The fertilization membrane of the star-fish and of the sea-urchin egg. *Anatomical record*, v. 18:226, 1920.
- The ineffectiveness of churning the content of an egg on its subsequent development. *Same*, v. 18:226, 1920.
- Microdissection studies on the fertilization of the star-fish egg. *American journal of physiology*, v. 51, 1920.
- A note on the structure of the contractile vacuole in amoeba proteus. *Anatomical record*, v. 18:225, 1920.
- Some studies on the surface layer in the living egg cell. *Society for Experimental Biology and Medicine. Proceedings*, v. 17:41, 1919.
- Chandler, B. A.** Are we getting proper returns on the money spent for labor? *American lumberman*, 7 June, 1919.
- Financial loss to the community due to forest lands becoming wastes. *Journal of forestry*, v. 18:31, 1920.
- Keeping accounts and saving waste. *Lumber world review*, 10 November, 1919, p. 5.
- A national forest and lumber policy. *American lumberman*, 5 July, 1919.

- Results of cutting at Ne-ha-sa-ne Park in the Adirondacks. *Journal of forestry*, v. 17:378, 1919.
- Shall we capitalize our forests? *Same*, v. 18:218, 1920.
- The use of our state forest reserves. *New York forestry*, July, 1919.
- Chandler, W. H.** The effect of the severe winter of 1917-18 and its lessons for the fruit grower. *Connecticut Pomological Society. Report*, v. 21:3, 1919.
- Hints on pruning orchard trees. *Same*, 21:38, 1919.
- Maintaining soil fertility in our orchards. *New York State Horticultural Society. Proceedings of the 2d annual meeting*, 1920, p. 234.
- Some preliminary results from pruning experiments. *Same*, 1920, p. 77.
- Some results as to the response of fruit trees to pruning. *American Society for Horticultural Science. Proceedings of the 16th annual meeting*, 1919, p. 88.
- Chao, Y. R.** A note on "continuous mathematical induction." *American Mathematical Society. Bulletin*, 2d ser., v. 26:17, 1919.
- Claassen, P. W.** Grasshopper control in the southern division of Kansas, by S. J. Hunter and P. W. Claassen. *Journal of economic entomology*, v. 7:73, 1914.
- The grasshoppers of Kansas. I. The melanopli of Kansas. *University of Kansas. Department of Entomology. Bulletin*, v. 11:5, October, 1917.
- Life history and biological notes on *Chlaenius impunctifrons* Say. (Coleoptera, Carabidae). *Entomological Society of America. Annals*, v. 12:95, 1919.
- Observations on the life history and biology of *Agromyza laterella* Zetterstedt (Diptera). *Same*, v. 11:9, 1918.
- A possible new source of food supply. *Scientific monthly*, v. 9:179, 1919.
- Coca, A. F.** Hypersensitiveness. *Tice, Frederick, ed. Practice of medicine. Vol. 1*:107, 1920.
- The mechanism of the anaphylaxis reaction in the rabbit. *Journal of immunology*, v. 4:219, 1919.
- The perfusion experiment in the study of anaphylaxis. *Same*, v. 4:209, 1919.
- Studies in anaphylaxis, by A. F. Coca and W. Kosakai. *Same*, v. 5: May, 1920.
- Collingwood, G. H.** Review: U. S. Department of Agriculture. Bulletin No. 753: Use of wood for fuel. *Journal of forestry*, v. 17:710, 1919.
- Comstock, J. H.** An introduction to entomology. Ithaca, N. Y., Comstock Publishing Co., 1920. 220p.
- Conner, L. A.** Cardiac diagnosis in the light of experiences with army physical examinations. *American journal of the medical sciences*, v. 158:773, 1919.
- The symptomatology and complications of influenza. *American Medical Association. Journal*, v. 73:321, 1919.
- Cooke, R. B., translator.** Platen-Hallermünde, August. To Cardenio, tr. from the German of Platen, by Reginald B. Cooke. Ithaca, N. Y., [U. S. Johnson Printing Co.], 1919. 13 l.
- Cooper, Lane.** Chesterfield's letters to his son. *Encyclopedia Americana*, v. 6:428, 1918.
- English mail coach. *Same*, v. 10:386, 1918.
- Greek culture. *Same*, v. 13:384, 1919.
- On conciliation with America. *Same*, v. 20:685, 1919.
- The Poetics of Aristotle. *Same*, v. 22:274, 1919.
- A pun in the Rhetoric of Aristotle. *American journal of philology*, v. 41:48, 1920.
- Things new and old. *Classical weekly*, v. 13:107, 1920.
- The university president. *Review*, v. 2:410, 1920.
- Craig, W. T.** Fertile wheat-rye hybrids, by H. H. Love and W. T. Craig. *Journal of heredity*, v. 10:195, 1919.
- Crane, T. F.** Italian social customs of the sixteenth century and their influence on the literatures of Europe. New Haven, Yale University Press, 1920. 689p. (Cornell studies in English. 5.)
- Lope de Vega's *El peregrino*. *Times [London]; literary supplement (Correspondence)*, 19 Sept., 1919, p. 499.

- Creighton, J. E.** Philosophy as the art of affixing labels. *Journal of philosophy, psychology and scientific methods*, v. 17:225, 1920.
- Reviews: Adams, G. P. Idealism and the modern age. *Philosophical review*, v. 28:511, 1919; Hetherington, H. J. W., and Muirhead, J. H. Social purpose. *Same*, v. 29:89, 1920.
- American editor. *Kant-Studien*, 1919-1920.
- editor. *Philosophical review*, 1919-1920.
- Crosby, C. R.** The Cornell University Entomological Expedition to South America in 1919-20. *Entomological news*, v. 31:139, 1920.
- An injurious leaf-miner of the honeysuckle, by C. R. Crosby and M. D. Leonard. *Journal of economic entomology*, v. 12:389, 1919.
- The organization of a special spray service in New York State, by C. R. Crosby and R. G. Palmer. *Same*, v. 13:212, 1920.
- Crosby, D. J.**, associate editor. Extension service news and farm bureau news, 1919-1920.
- Cusick, J. T.** Fishy flavor in butter. *Dairy science*, v. 4, May, 1920.
- Phosphorus in butter. *Cornell University. Agricultural Experiment Station. Memoir* 30, May, 1920.
- Dallenbach, K. M.** Blindfold chess: the single game. *Studies in psychology contributed by colleagues and former students of Edward Bradford Titchener*, 1917, p. 214.
- The effect of practice upon visual apprehension in the feeble-minded. *Journal of educational psychology*, v. 10:61, 1919.
- The history and derivation of the word "function" as a systematic term in psychology. *American journal of psychology*, v. 26:473, 1915.
- John Wallace Baird. *Clark University. Library. Publications*, v. 6:33, 1919.
- Snow-rollers. *Science*, n.s., v. 50:371, 1919.
- associate editor. Minor studies from the Psychological Laboratory of Cornell University. No. 47. *American journal of psychology*, v. 31:87, 1920.
- Dennis, L. M.** Apparatus for the determination of melting points. *Journal of industrial and engineering chemistry*, v. 12:366, 1920.
- The electrolysis of solutions of the rare earths, by L. M. Dennis and B. L. Lemon. *Chemical news*, v. 118:267, 1919.
- The electrolysis of solutions of the rare earths, by L. M. Dennis and P. A. van der Meulen. *Same*, v. 119:1, 1919.
- The electrolysis of solutions of the rare earths, by L. M. Dennis and A. B. Ray. *Same*, v. 119:30, 1919.
- Gallium, by L. M. Dennis and J. A. Bridgman. *Same*, v. 118:245, 1919.
- A search for an alkali element of higher atomic weight than cesium, by L. M. Dennis and R. W. G. Wyckoff. *American Chemical Society. Journal*, v. 42:985, 1920.
- Edwards, D. J.** The arterial pressure curve as influenced by the occlusion of certain vascular areas and by histamine. *American journal of physiology*, v. 52:284, 1920.
- Segmental activity in the heart of the limulus. *Same*, v. 52:276, 1920.
- Eggleston, Cary.** The administration of digitalis by the "Eggleston method." *American Medical Association. Journal*, v. 74:733, 1920.
- A further contribution to the pharmacology of the local anesthetics, by Cary Eggleston and Robert A. Hatcher. *Journal of pharmacology and experimental therapeutics*, v. 13:433, 1919.
- Einhorn, Max.** Achylia gastrica and its differentiation from malignant diseases of the stomach and pernicious anaemia. *International clinics*, 20th ser., v. 2:1, 1919.
- Duodenal perforation (fistula) treated by duodenal (jejunal) alimentation. *American Medical Association. Journal*, v. 74:790, 1920.
- Fractional examination of the duodenal contents. *Association of American Physicians. Transactions*, v. 33:309, 1918.
- Further experiences with the string test. *American Medical Association. Journal*, v. 73:1509, 1919.
- Infectious meteorism. *Southern medical journal*, v. 13:92, 1920.

- An intestinal tube. *New York medical journal*, v. 110:456, 1919.
- Results of duodenal alimentation in peptic ulcers. *Medical record*, v. 96:95, 1919.
- X-ray findings with the delineator in cardiospasm, by Max Einhorn and Thomas Scholz. *Same*, v. 96:715, 1919.
- Elston, E. D. Numerous abstracts of geological articles in *American Ceramic Society. Journal*, v. 1-2, 1919-1920.
- Emerson, R. A. Heritable characters of maize. II. Pistillate flowered maize plants. *Journal of heredity*, v. 11:65, 1920.
- Engeln, O. D. von. The world's food resources. *Geographical review*, v. 9:170, 1920.
- Ewing, James. A case of thymoma. *New York Pathological Society. Transactions*, v. 20, 1920.
- Pulmonary lesions of influenza pneumonia. *Same*, v. 19, 1919.
- Faust, A. B. List of Swiss emigrants in the eighteenth century to the American colonies. I. Zürich to Carolina and Pennsylvania, 1734-1744. Washington, D. C., National Genealogical Society, 1920. 100p.
- *Reviews*: Campbell, T. M. The life and works of Friedrich Hebbel. *Modern language notes*, v. 35:308, 1920; Dierauer, J. Geschichte der Schweizerischen Eidgenossenschaft. V. *American historical review*, v. 24:683, 1919; Goebel, J. Jahrbuch der Deutsch-Amerikanischen Historischen Gesellschaft von Illinois, Bd. 17, Jahrgang 1917. *Same*, v. 25:553, 1920.
- Fish, P. A. Book of veterinary doses, therapeutic terms and prescription writing. 5th ed. Ithaca, N. Y., Comstock Publishing Co., 1919. 185p.
- The examination of the urine of the horse and man. 3d ed. Ithaca, N. Y., Comstock Publishing Co., 1919. 79p.
- Morbidity and mortality in army animals. *U. S. Surgeon General. Report*, 1919. Also in *Cornell veterinarian*, v. 10:141, 1920.
- Veterinary training preparatory for the army. *American Veterinary Medical Association. Journal*, v. 55:528, 1919.
- Fish, W. W. The book of ice-cream. New York, Macmillan Co., 1919. 302p.
- Fitzpatrick, H. M. George Francis Atkinson. *Science*, n. s., v. 49:371, 1919.
- Publications of George Francis Atkinson. *American journal of botany*, v. 6:273, 1919.
- *Rostronitschkia*, a new genus of Pyrenomycetes. *Mycologia*, v. 11:163, 1919.
- Foster, N. B. A consideration of the surgical hazards in diabetic patients. *Annals of surgery*, v. 71:382, 1920.
- Diseases of the thyroid and parathyroid. *Nelson's loose-leaf system of medicine*, 1920.
- Fraser, A. C. The inheritance of the weak awn in certain avena crosses and its relation to other characters of the oat grain. *Cornell University. Agricultural Experiment Station. Memoir No. 23, June, 1919*.
- Frost, J. N., collaborator. Surgical and obstetrical operations, by W. L. Williams with the collaboration of James N. Frost. 4th revised ed. Ithaca, N. Y., The author, 1919. 196p.
- Gage, S. H. Doctor James Law: a biography. *Cornell University. Official publications*, v. 10, D:12, 1919.
- Educational and material needs of the Ithaca division of the Cornell University Medical College. *Cornell University. Medical College. Report of the conference of the faculty and alumni of the Medical College at the Cornell University semi-centennial celebration, June 20, 1919. 1919, p. 10*.
- The free granules (Chylomicrons) of fresh blood as shown by the dark-field microscope, and their dependence upon the kind of food ingested. *Anatomical record*, v. 18:233, 1920.
- The free granules (Chylomicrons) of the blood as shown by the dark-field microscope, illustrated. *Cornell veterinarian*, v. 10:154, 1920.
- Modern dark-field microscopy and the history of its development. *American Microscopical Society. Transactions*, v. 39:95, 1920.

- Professor Burt Green Wilder, Cornell University, 1867-1910; a biography and appreciation, with portrait. *Guide to nature*, v. 12:51, 1919.
- Gage, V. R.** Investigation of the muffling problem for airplane engines, by G. B. Upton and V. R. Gage. *National Advisory Committee for Aeronautics. 5th annual report. Report No. 55*, 1919.
- A study of airplane engine tests. *Same, report No. 46*, 1919.
- Gamble, D. L.** The use of stereoscopic roentgenograms in studying the circulatory system of vertebrates, by D. L. Gamble and R. O. Hitchcock. *Anatomical record*, v. 18:125, 1920.
- Georgia, F. R.** Field methods for the chlorination of small amounts of water. *American Water Works Association. Journal* v. 6:654, 1919.
- Sanitary chemistry. *American year book*, 1919, p. 647.
- editor. Cornell chemist, v. 9, 1919-1920.
- Gibson, C. L.** An analysis of the results of a six years' follow-up system in a hospital surgical service. *Annals of surgery*, v. 70:661, 1919.
- The results of operations for chronic appendicitis; a study of 555 cases. *American journal of the medical sciences*, v. 159:654, 1920.
- Goldberg, S. A.** Differential features between melanosis and melanosarcoma. *New York State Veterinary Medical Society. Proceedings*, 1920.
- Graves, L. G.** Editorials and other articles contributed monthly to *Modern hospital*, 1919-1920.
- Gudernatsch, J. F.** Disturbances in the development of mammalian embryos caused by radium emanation, by J. F. Gudernatsch and H. J. Bagg. *Society for Experimental Biology and Medicine. Proceedings*, May, 1920.
- The ductless glands and the spleen. *Morris, Henry. Human anatomy*, 1920.
- Guerlac, O. G.** Une attaque anglaise contre la paix de Versailles *Paix par le droit*, May, 1920, p. 138.
- M. Millerand, the French Premier. *Review*, v. 2:456, 1920.
- M. Paul Deschanel. *Evening Post [New York]*, 19 January, 1920.
- The new French Président. *Review*, v. 2:113, 1920.
- Le Président Wilson et la paix. *Paix par le droit*, November, 1919, p. 456.
- Le Sénat Américain et le traité de paix. *Same*, December, 1919, p. 516.
- Gustafson, A. F.** Limestone and land plaster. *Ontario County farm bureau news*, March, 1920, p. 4. Also in the *County farm bureau news* publications of the state.
- Guthrie, E. S.** Butter laboratory guide, by E. S. Guthrie and H. C. Jackson. Ithaca, N. Y. Comstock Publishing Co., 1919. 65p.
- Hagan, W. A.** Coccidiosis in cattle, by W. D. Way and W. A. Hagan. *Cornell veterinarian*, v. 10:17, 1920.
- A fatal unidentified cattle disease in New York State, by J. K. Bosshart and W. A. Hagan. *Same*, v. 10:102, 1920.
- White or calf scours, by W. L. Williams, W. A. Hagan, and C. M. Carpenter. *American Veterinary Medical Association. Journal*, v. 57:124, 1920. Also in *Ohio State University. Veterinary alumni quarterly*, v. 7:305, 1920.
- Hamilton, G. L.** Additional notes concerning the descendants of Ganelon—and of others. *Romanic review*, v. 10:277, 1920.
- Romance language. *American year book*, 1919, p. 786.
- editor. Modern Language Association. Publications, 1919-1920. *Romanic review*, 1919-1920.
- Hammond, W. A.** *Review*: Burns, G. D. Greek ideals. *Philosophical review*, v. 29:100, 1920.
- Hardenburg, E. V.** Cutting seed potatoes. *Potato magazine*, v. 2, No. 9, March, 1920.
- Mosaic disease as a factor influencing yield in potatoes. *Same*, v. 2, No. 5, Nov., 1919.
- Report of potato inspection work in 1919. *New York State Potato Association. Proceedings*, No. 6:6, 1919.
- Soil and seed-bed for potatoes. *Pennsylvania farmer*, v. 47, No. 12, March, 1920.

- editor. New York State Potato Association. Proceedings, No. 6, 1919.
- Harris, J. R.** Can you tell flat-feet? Can you correct them? *Scouting*, v. 8:7, 1920.
- Hartwell, J. A.** The treatment of empyema. *Annals of surgery*, v. 37:55, 1919.
- Hatcher, R. A.** A further contribution to the pharmacology of the local anesthetics, by Cary Eggleston and Robert A. Hatcher. *Journal of pharmacology and experimental therapeutics*, v. 13:433, 1919.
- Standardization of digitalis; a preliminary report. *American Pharmaceutical Association. Journal*, v. 8:913, 1919.
- Hausman, L. A.** Hairs that make fabrics. *Scientific American*, v. 122:184, 1920.
- Identifying hairs used in textiles. *Houghton industrial digest*, v. 2:14, 1920.
- The microscopic identification of commercial fur hairs. *Scientific monthly*, v. 10:70, 1920.
- The migration group chart. *Bird lore*, v. 22:86, 1920.
- The orange striped anemone (*Sargartia luciae*, Verrill). *Biological bulletin*, v. 37:363, 1919.
- Tiny creatures that make bad water. *Scientific American*, v. 122:427, 1920.
- Hayden, C. E.** Report of the Secretary. *New York State Veterinary Medical Society. Proceedings*, 1919, p. 29.
- Abstracts: Dodd, Sydney. Infestation of the skin, etc., of sheep by grass seeds. *Cornell veterinarian*, v. 10:50, 1920; M'Fadyean, John. Botryomycosis. *Same*, v. 10:50, 1920; M'Fadyean, John. Tuberculosis in the horse caused by bacilli of the avian type. *Same*, v. 10:51, 1920.
- editor. New York State Veterinary Medical Society. Proceedings, 1919-1920.
- Heinicke, A. J.** Concerning the shedding of flowers and fruits and other abscission phenomenon in apples and pears. *American Society for Horticultural Science. Proceedings*, 1919, p. 76.
- Hermannsson, Halldur.** Modern Icelandic; an essay. Ithaca, N. Y., Cornell University Library, 1919. 66p. (*Islandica*, v. 12.)
- Sir George Webbe Dasent. *Skirnir*, v. 93:117, 1919.
- Vinlansferdirnar. *Timarit Thjodraeknistfélags Íslendinga*, v. 1:25, 1919.
- Vinlands Beliggenhed. *Det Nye Nord*, v. 2, No. 3:76, 1920.
- Reviews: Steensby, H. P. The Norsemen's route from Greenland to Wineland, and Fossum, Andrew. The Norse discovery of America. *American historical review*, v. 25:290, 1920.
- Herrick, G. W.** Insects of economic importance; a textbook of economic entomology, revised and enlarged. New York, Macmillan Co., 1920. 165p.
- The apple maggot in New York. *Cornell University Agricultural Experiment Station. Bulletin* 402, February, 1920.
- Some enemies of the garden. *Nature-study review*, v. 16:113, 1920.
- Some insect pests of the apple orchard. *American fruit grower*, v. 39:3, 1919.
- The winter of 1918-19 and the activities of insects with special reference to the clover leaf-weevil (*Hypera punctata*). *Entomological Society of America. Annals*, v. 13:101, 1920.
- [Articles in the *Rural New Yorker*, v. 79]: Weevils in dried fruit, 22 March, 1919, p. 523; White grubs in strawberries, 12 April, 1919, p. 641; Getting ahead of the squash-vine borer, 14 June, 1919, p. 963; Peculiar habits of the ox gadfly, 28 June, 1919, p. 1034; An insect with a handle, 2 August, 1919, p. 1153; Do angleworms rain down? 6 September, 1919, p. 1304; Cleaning up the curculio in an old orchard, 11 October, 1919, p. 1485; Controlling woolly aphis, 20 December, 1919, p. 1857; The wheat straw mite attacking man, 17 January, 1920, p. 96; A stick that walks, 24 January, 1920, p. 155; Where does the pea bug lay its eggs? 21 February, 1920, p. 366; Our friendly muddaubers, 21 February, 1920, p. 361; Weevils in stored beans, 14 February, 1920, p. 295; Spraying the apple orchard this spring, 6 March, 1920, p. 456; A weevil that likes strawberry buds and blossoms, 1 May, 1920, p. 873.

- Herring, J. A. Diaphragmatic hernia, discovered on routine examination of the chest, by H. J. Howk and J. A. Herring. *American journal of roentgenology*, June, 1920.
- An uncommon case of pleural effusion, by H. J. Howk and J. A. Herring. *American review of tuberculosis*, v. 3:585, 1919.
- X-rays. *Mount McGregor optimist*, v. 6, No. 5, 1920.
- Hespelt, E. H. Industrial notes. *Philippine craftsman*, v. 3, No. 9, 1915.
- Tegalondo—A Javanese agricultural school. *Same*, v. 5:517, 1917.
- Hitchcock, R. O. The use of stereoscopic roentgenograms in studying the circulatory system of vertebrates, by D. L. Gamble and R. O. Hitchcock. *Anatomical record*, v. 18:125, 1920.
- Hopkins, G. S. The establishment and growth of the New York State Veterinary College. *Cornell University. Official publications*, v. 10, No. D:20, 1919.
- Hopper, H. A. Better livestock in New York. *Cornell extension bulletin* No. 38:107, 1919.
- Hosmer, R. S. Forestry at Cornell. *Cornell forester*, v. 1:33, 1920.
- Is a national forest policy practicable? *Lumber world review*, v. 37, No. 6:22, 1919.
- One aspect of the national program of forestry: cost. *Journal of forestry*, v. 18:9, 1920.
- Hunt, E. L. Plato on rhetoric and rhetoricians. *Quarterly journal of speech education*, v. 6, No. 3:33, 1920.
- editor. Alumni Association of Huron College. *Alumni quarterly*, 1919-1920.
- Hutchinson, J. I. Series. *Encyclopedia Americana*, v. 24:592, 1919.
- Jackson, H. C. Butter laboratory guide, by E. S. Guthrie and H. C. Jackson. Ithaca, N. Y., Comstock Publishing Co., 1919. 65p.
- Jacoby, H. S. The employed officer of the association; a paper read before the Employed Officers' Association at Conference Point on Lake Geneva, Wis., July 3, 1919. Published by the Employed Officers' Association [of organized Sunday school work], 1919. 8p.
- Correspondence [on a History of engineering]. *Engineering news-record*, v. 84:782, 1920.
- Reconstruction. *Sunday school standard*, v. 3:3, 1919.
- Review of recent advances in the length of spans of different classes of bridges. *Cornell civil engineer*, v. 28:55, 1919. Also in *Engineering-contracting*, v. 53:100, 1920, and an abstract: Longest spans of American bridges, in *Engineering news-record*, v. 84:315, 1920.
- Spiritual suggestions for the field of science. *Adult Bible class monthly*, v. 12:351, 1919.
- joint autho.. Agreement of Joint Committee on Reference and Counsel of the International Sunday School Association and the Sunday School Council of Evangelical Denominations. Detroit, Mich., International Sunday School Association, 1919. 15p. Also in *Sunday School Council of Evangelical Denominations. Minutes, special meeting*, Cleveland, Ohio, June 25-26, 1919, p. 14.
- Discussion: Specifications for steel railway bridges. *American Railway Engineering Association. Bulletin*, v. 21:26, 1919.
- Karapetoff, Vladimir. Attachment for reading airplane compass at a distance. *Sibley journal of engineering*, v. 33:80, 1919.
- Audible code calling in shipbuilding plants. *Nautical gazette*, v. 98:281, 1920.
- Audible electric signals in industrial plants. *Electrical world*, v. 73:1394, 1919.
- Audible electric signals in industrial plants and acoustical engineering. *American Institute of Electrical Engineers. Journal*, v. 39:13, 1920.
- Audible signals in factory an aid to efficiency. *Society of Industrial Engineers. Proceedings*, 1919, p. 154.

- Audible signals in foundries. *American Foundrymen's Association. Proceedings*, v. 28:457, 1920. Also in *Iron trade review*, v. 65:894, 1919, and in *Sibley journal of engineering*, v. 33:101, 1919.
- Christmas appeal for true brotherhood. *Ithaca journal-news*, 24 December, 1919.
- Code calling in factories. *Industrial management*, v. 58:306, 1919.
- Code calling systems in steel plants. *Iron age*, v. 105:1501, 1920.
- Conflict of individual with society. *Cornell daily sun*, 14 April, 1920. Also in *Ithaca journal-news*, 14 April, 1920.
- Development of American research. *Chemical and metallurgical engineering*, v. 21:722, 1919.
- Electrical research needs strong support. *Electrical world*, v. 75:603, 1920.
- Hunting and parallel operation of synchronous machines. *Sibley journal of engineering*, v. 34, No. 3:3, 1920.
- Psychology of the Russian mind. *Ithaca journal-news*, 27 January, 1920.
- Significance of research in American universities. *Sibley journal of engineering*, v. 34, No. 3:1, 1920. Also in *Cornell daily sun*, 13 November, 1919.
- Some present day research problems in electrical engineering. *Telegraph and telephone age*, No. 12, p. 341, 16 June, 1920.
- Some remarks on the co-operative method of engineering education. *Engineering education*, v. 10:101, 1919.
- Working up in a swing. *Science*, v. 50:70, 18 July, 1919.
- Discussions: American and international labor conditions. *Society of Industrial Engineers. Proceedings*, 1910, p. 77; Method of symmetrical co-ordinates applied to the solution of polyphase networks. *American Institute of Electrical Engineers. Transactions*, v. 37, pt. 2:1129, 1918.
- Keniston, R. H.** The choice of a language: Spanish. *Modern language bulletin of Philadelphia*, v. 1:4, 1919.
- Common words in Spanish. *Hispania*, v. 4:85, 1920.
- translator: Blasco Ibáñez, Vicente. Woman triumphant (La maja desnuda), translated from the Spanish by Hayward Keniston, with a special introductory note by the author. New York, E. P. Dutton and Co., [1920], 322p.
- Reviews: Blasco Ibáñez, Vicente. The novels of Blasco Ibáñez. *New republic*, v. 20, No. 260, pt. 2:12, 1919; Ford, J. D. M. Main currents of Spanish literature. *Same*, v. 22:39, 1920.
- Kennard, E. H.** Note on three devices for use in electrometry. *Science*, v. 47:271, 1918.
- On the thermodynamics of fluorescence. *Physical review*, v. 11:29, 1918.
- Unipolar induction. *London, Edinburgh, and Dublin philosophical magazine*, v. 23: 937, 1912.
- Kennedy, Foster.** Infective neuronitis. *Archives of neurology and psychiatry*, v. 2:621, 1919.
- Intracranial tumors. *Nelson's loose-leaf system of medicine*, 1920.
- Brain tumors. *Same*, 1920.
- Kerr, A. T.** [Summary of Alumni forum held during Cornell University Semi-Centennial Celebration, Ithaca, N. Y., 1919]. 4p.
- Financial statement of funds available and expenditures. *Cornell University. Medical College. Conference, faculty and alumni of the Medical College at the Cornell University Semi-Centennial Celebration*, June 20, 1919, p. 17.
- Keyes, E. L., jr.** Prostatism. *Boston medical and surgical journal*, v. 182:79, 1920.
- Kingbury, B. F.** The developmental origin of the notochord. *Science*, v. 51:190, 1920.
- Knudson, Lewis.** Viability of detached root-cap cells. *American journal of botany*, v. 6:309, 1919.
- Lambert, Alexander.** The incidence of acute rheumatic fever at Bellevue hospital. *American Medical Association. Journal*, v. 74:993, 1920.
- Medicine, a determining factor in war. *New York medical journal*, v. 109: 1013, 1919. Also in *Medical record*, v. 95:983, 1919.

- Sixty years of medicine; an address delivered at the 60th annual commencement of the Long Island College Hospital, Brooklyn, N. Y. *Medical record*, v. 96:177, 1919.
- The underlying causes of the narcotic habit. *Modern medicine*, v. 2, No. 1, January, 1920.
- Lamoureux, A. J.** The Lamoureux record, No. 1, 1919. 12p.
- Latta, J. S.** The morphology of the so-called balancers in certain species of amblystoma. *Anatomical record*, v. 17:63, 1919.
- Lee, B. J.** Abdominal surgery (in war). *Burghard, F. F., and Kanavel, A. B., editors. Oxford loose leaf surgery*, v. 5, 1919.
- The contribution of the war to the surgery of the knee-joint. *Annals of surgery*, v. 70:464, 1919.
- Experiences in surgery with the second division of the American Expeditionary Force. *New York Hospital. General bulletin*, v. 1:46, 1919.
- Transfusion. *Keen, W. W. Surgery*, v. 6, 1919.
- Leonard, M. D.** Demonstrations show cabbage maggot control. *Nassau County farm and home bureau news*, May, 1919, p. 2.
- The immature stages of the goldenrod leaf-bug, *Strongylocoris stygica* Say (Miridae, Heterop). *Canadian entomologist*, v. 51:178, 1919.
- An injurious leaf-miner of the honeysuckle, by C. R. Crosby and M. D. Leonard. *Journal of economic entomology*, v. 12:389, 1919.
- The potato aphid and problems relating to its control. *New York State Potato Association. Proceedings*, No. 6:24, 1919.
- The present status of dusting apple trees. *Organized farmer of Maine*, v. 1, No. 12, 18 March, 1920.
- Rosebugs injure grapes and ornamentals. *Nassau County farm and home bureau news*, May, 1919, p. 3.
- Love, H. H.** Fertile wheat-rye hybrids, by H. H. Love and W. T. Craig. *Journal of heredity*, v. 10:195, 1919.
- Lusk, Graham.** Animal calorimetry. XVI. The influence of lactic acid upon metabolism, by H. V. Atkinson and G. Lusk. *Journal of biological chemistry*, v. 40:79, 1919.
- A medical school, in the war and after. *Science*, v. 50:403, 1919.
- A national laboratory of human nutrition. *Same*, v. 50:97, 1919.
- Nutritional standards of adolescence. *Journal of home economics*, v. 11:281, 1919. Also under title: Nutrition of adolescence. *U. S. Children's Bureau. Publications: Conference series No. 1:256*, 1919.
- On the problem of the production of fat from protein in the dog, by H. V. Atkinson and G. Lusk. *National Academy of Sciences. Proceedings*, v. 5:246, 1919.
- Scientific medicine—yesterday and tomorrow. *American Medical Association. Journal*, v. 73:181, 1919.
- translator. The eight hour day, a French medical interpretation; translated by Dr. Lusk from an article in *La presse medicale*. *American Medical Association. Journal*, v. 73:1717, 1919.
- Lyon, T. L.** The formation of nitrates in a soil following the growth of red clover and of timothy, by T. L. Lyon, J. A. Bizzell, and B. D. Wilson. *Soil science*, v. 9:53, 1920.
- How can the soil survey be made more useful to the farmer? *Cornell countryman*, v. 17:509, 1920.
- McCaskill, O. L.** Respondeat superior as applied in New York to quasi-public and eleemosynary institutions. *Cornell law quarterly*, v. 5:409, 1920.
- McCurdy, J. C.** Concrete septic tanks and sub-surface irrigation. *Concrete builder*, v. 3:67, 1920.
- Leveling for drainage purposes. *Cornell countryman*, v. 16:8, 1919.
- MacCurdy, J. T.** The psychology of war. London, Wm. Heinemann, 1917. 68p. New York, E. P. Dutton & Co., [1918]. 93p.
- War neuroses. Cambridge, University Press, 1918. 132p.
- Concerning Hamlet and Orestes. *Journal of abnormal psychology*, v. 13:250, 1918.

- Epileptic dementia. *Psychiatric bulletin*, v. 9:341, 1916.
- Experimental pathology of the central nervous system studied with vital azo dyes. *Same*, v. 11:1, 1917.
- Idiopathic epilepsy. *Journal of nervous and mental diseases*, v. 45:157, 1917.
- The practical function of the psychiatric clinic. *Mental hygiene*, v. 2:53, 1918.
- Psychiatric clinics in the schools. *American journal of public health*, v. 6:1265, 1916.
- Psychological aspects of the present unrest. *Survey*, v. 43:665, 1920.
- McInerney, T. J.** A comparative study of some methods for determining the fat content of skim-milk, by J. T. McInerney and H. C. Troy. *Cornell University. Agricultural Experiment Station. Bulletin* 401:69, 1920.
- Mann, A. R.** The College of Agriculture and its relation to the fruit industry of the state. *New York State Horticultural Society. Proceedings of the 2d annual meeting*, 1920, p. 199.
- The economic situation. *Foods and markets*, v. 2, No. 15:3, 1919.
- Greeting to students. *Cornell countryman*, v. 17, No. 1:47, 1920.
- The pedigreed community. *Rural manhood*, v. 11, No. 1:11, 1920.
- State College of Agriculture and State Agricultural Experiment Station affiliate. *Cornell countryman*, v. 17:387, 1920.
- The tendency of agricultural progress. *New York State fruit grower*, v. 4, No. 2-3, February-March, 1920. Also in *New York State Horticultural Society. Proceedings of the 2d annual meeting*, 1920, p. 103.
- Thirty-second annual report of the New York State College of Agriculture at Cornell University and the Agricultural Experiment Station established under the direction of Cornell University, Ithaca, N. Y., 1919. Albany, N. Y., J. B. Lyon Co., 1920. 2v.
- Mason, J. F., editor.** Viaud, Julien. *Pêcheur d'Islande* par Pierre Loti, edited with notes, exercises, and vocabulary, by James F. Mason. New York, Henry Holt & Co., 1920. 233p.
- Review: Jensen, E. M. The influence of French literature on Europe. *Modern language notes*, v. 34:447, 1919.
- Maynard, L. A.** The decomposition of sweet clover as a green manure under greenhouse conditions. *Cornell University. Agricultural Experiment Station. Bulletin* 394:121, 1917.
- Feed control legislation. *Cornell countryman*, v. 17:447, 1920.
- The refinement of feeding experiments for milk production by the application of statistical methods, by L. A. Maynard and W. I. Myers. *Cornell University. Agricultural Experiment Station. Bulletin* 397:213, 1918.
- Some studies on casein. *Journal of physical chemistry*, v. 23:145, 1919.
- Milks, H. J.** Treatment of some diseases of the eye. *Cornell veterinarian*, v. 10:113, 1920.
- Misner, E. G.** Calculating the cost of milk production. *Cornell reading course for the farm. Lesson* 142:197, 1919.
- Milk production costs. *Journal of farm economics*, v. 1:97, 1919.
- Moore, V. A.** The address of the president, American Veterinary Medical Association. *American Veterinary Medical Association. Journal*, v. 56:238, 1919.
- Correlation of our present knowledge regarding infectious abortion in cattle. *Iowa State College. Official publications*, v. 17, 1919.
- The diseases of cattle communicable to man through milk. *New York State Dairyman's Association. Proceedings of the 42d annual meeting. Bulletin* No. 119, 1918.
- The importance of tuberculous-free herds. *Holstein-Friesian world*, v. 17, 1920.
- The problem of tuberculosis in cattle. *Cornell reading course for the farm. Lesson* No. 146:309, 1919.
- The relation of the Veterinary College to the state. *Cornell University. Official publications*, v. 10, D:35, 1919.

- The state law relative to the physical examination of cattle. *American Veterinary Medical Association. Journal*, v. 56:20, 1919.
- Teaching bacteriology, by V. A. Moore, W. J. Crocker, and C. D. Rice. *Same*, v. 55:353, 1919.
- The transmission of diseases of cattle to man through milk. *New York State journal of medicine*, v. 19:138, 1919.
- Tuberculosis: its prevalence, lesions and interpretation of tests. *Iowa State College. Official publications*, v. 17, 1919.
- *Introduction*. Ward, A. R., and Gallagher, B. A. Diseases of domesticated birds. New York, Macmillan Co., 1920.
- Myers, C. H. The use of a selection coefficient. *American Society of Agronomy. Journal*, v. 12:106, 1920.
- Myers, W. I. The refinement of feeding experiments for milk production by the application of statistical methods, by L. A. Maynard and W. I. Myers. *Cornell University. Agricultural Experiment Station. Bulletin* 397:213, 1918.
- Nammack, C. H. A returned soldier carrier of meningococcus. *Medical record*, v. 96:590, 1919.
- The significance of yellow spinal fluid. *American journal of the medical sciences*, v. 159:540, 1920.
- Neal, J. B. Encephalitis lethargica. New York City. Health Department. *Monthly bulletin*, v. 9:69, 1919.
- Epidemic meningitis. *Medical clinics of North America*, v. 2:233, 1918.
- Epidemic meningitis in children under one year. *International clinics*, ser. 28, v. 4:1, 1918.
- How the Health Department may aid in the diagnosis and treatment of meningitis. *New York medical journal*, v. 107:876, 1918.
- Lethargic encephalitis. *Archives of neurology and psychiatry*, v. 2:271, 1919.
- Lethargic encephalitis. *International clinics*, ser. 29, v. 2:184, 1919.
- Meningeal conditions noted during the epidemic of influenza. *American Medical Association. Journal*, v. 72:714, 1919. Also in *New York City. Health Department. Reprint series*, No. 77, 1919.
- Treatment of cases of epidemic meningitis illustrating the importance of frequent repetition of the injection. *American Medical Association. Journal*, v. 66:862, 1916.
- Treatment of epidemic meningitis. *New York City Health Department. Monthly bulletin*, v. 8:193, 1918.
- Norris, Charles. The lesions in wood alcohol poisoning. *New York medical journal*, v. 111:583, 1920.
- The office of chief medical examiner; its relation to the public, the District Attorney's office, and the medical profession. *New York State journal of medicine*, v. 19:189, 1919.
- Practical pathology. *Long Island medical journal*, v. 12:201, 1918.
- Northup, C. S. A bibliography of Phi Beta Kappa. XVIII-XIX. *Phi Beta Kappa key*, v. 4:193, 245, 1920.
- List of American philological periodicals. *Modern Humanities Research Association. Bulletin*, July, 1919, p. 18.
- Practical English for technical students. *Cornell civil engineer*, v. 28:51, 1919.
- Problems of democracy. *South Atlantic quarterly*, v. 19:171, 1920.
- *Reviews*: Caldwell, W. E. Hellenic conceptions of peace. *Cornell alumni news*, v. 22:474, 17 June, 1920; Crane, T. F. Italian social customs of the sixteenth century and their influence on the literatures of Europe. *Same*, v. 22:386, 6 May, 1920; Halsey, F. W., compiler. The Literary digest history of the world war. *Same*, v. 22:136, 19 December, 1919.
- Also many unsigned reviews in the *Cornell alumni news*.
- *co-operating editor*. Journal of English and German philology, 1919-1920.
- *Phi Beta Kappa key*, 1919-1920.
- *joint editor*. Cornell alumni news, 1919-1920. Cornell studies in English, 1919-1920.

- Oberndorf, C. P. Homosexuality. *Medical record*, v. 96:840, 1919.
- Intermediary stages in sexual development. *Journal of nervous and mental diseases*, v. 50:453, 1919.
- Phases of autoerotism. *New York medical journal*, v. 110:756, 1919.
- Ogden, R. M. The idea of the university. *School and society*, v. 10:271, 311, 361, 1919.
- Is immortality plausible? *Sewanee review*, v. 28:129, 1920.
- The tonal manifold. *Psychological review*, v. 27:136, 1920.
- Reviews: Coover, J. E. Experiments in psychical research at Leland Stanford University. *Psychological bulletin*, v. 16:363, 1919; Hearing. [general summary] *Same*, v. 16:142, 1919; Hobson, E. G. Educational legislation and administration in the State of New York from 1777 to 1850. *Cornell law quarterly*, v. 5:366, 1920; Perrett, Wilfred. Some questions of phonetic theory. *Psychological bulletin*, v. 16:349, 1919; Pikler, Julius. Theorie der Konsonanz und Dissonanz. *Same*, v. 16:350, 1919; Seashore, C. E. The psychology of musical talent. *Journal of applied psychology*, v. 4:105, 1920; Wrightson, Thomas. An enquiry into the analytical mechanism of the internal ear. *Psychological bulletin*, v. 15:445, 1918.
- Orth, S. P. The armies of labor, a chronicle of the organized wage-earners. New Haven, Yale University Press, 1919. 279p. (Chronicles of America series. Vol. 40.)
- Our foreigners, a chronicle of Americans in the making. New Haven, Yale University Press, 1920. 255p. (Chronicles of America series. Vol. 35.)
- Owens, F. W. Review: Dowling, L. W. Projective geometry. *American Mathematical Society. Bulletin*, v. 26:39, 1919.
- Palmer, E. L. How the Cornell rural school leaflet hopes to teach conservation through nature study. *Nature study review*, v. 16:65, 1920.
- Just ooze and slime! Is the expression fair? *Same*, v. 16:27, 1920.
- supervisor and editor. Cornell rural school leaflet, v. 13, No. 2-4, 1919-1920.
- Palmer, R. G. The organization of a special spray service in New York State, by C. R. Crosby and R. G. Palmer. *Journal of economic entomology*, v. 13:212, 1920.
- Papanicolaou, G. N. Effects of underfeeding on ovulation and the oestrous rhythm in guinea-pigs, by G. N. Papanicolaou and C. R. Stockard. *Society for Experimental Biology and Medicine. Proceedings*, v. 17, 1920.
- The vaginal closure membrane, copulation and the vaginal plug in the guinea-pig, with further considerations of the oestrous rhythm, by C. R. Stockard and G. N. Papanicolaou. *Biological bulletin*, v. 37:222, 1919.
- Peters, J. P., jr. Urinary tract purpura, a probable entity, by A. R. Stevens and John P. Peters, jr. *Journal of urology*, v. 4:1, 1920.
- Phelps, A. C. The English chapter house; extracts from a lecture at the Metropolitan Museum of Art, New York, January 10, 1920. *Architecture*, v. 41:97, 1920.
- The English parish church. *American architect*, v. 117:425, 1920.
- Rahe, A. H. An experimental study of the effect of autogenous B. coli vaccines on the intestinal colon bacilli of dogs, by J. C. Torrey and A. H. Rahe. *Journal of immunology*, v. 5:133, 1920.
- Recknagel, A. B. Edward Ilsley Tinkham. *Cornell forester*, v. 1:32, 1920.
- The human element as revealed in the timber census of New York State during the war. *Same*, v. 1:15, 1920.
- Inspection, supervision and control of private forestry measures: methods and cost. *Journal of forestry*, v. 18:23, 1920.
- Spruce in Schoharie County. *New York forestry*, v. 6:13, October, 1919.
- Timber resources of New York State. *American lumberman*, No. 2340, 20 March, 1920.
- The work of the Empire State Forest Products Association. *New York forestry*, v. 7:11, May, 1920.
- Editorial Board. *Journal of forestry*, 1919-1920.

- Reddick, Donald.** Transmission of the virus of bean mosaic in seed and observations on thermal death-point of seed and virus, by Donald Reddick and V. B. Stewart. *Phytopathology*, v. 9:445, 1919.
- Reed, F. W.** On integral invariants. *American journal of mathematics*, v. 40:97, 1918.
- Reed, H. D.** The morphology of the sound-transmitting apparatus in caudate amphibia and its phylogenetic significance. *Journal of morphology*, v. 33:325, 1920.
- Reese, R. G.** Successful removal of the orbital portion of the optic nerve for a primary intradural tumor, with preservation of the eyeball and motility, by the Kronlein method. *Archives of ophthalmology*, June, 1920.
- Rettger, E. W.** Economical design of pipes. *Engineering record*, v. 70:464, 1914.
- Economical size of pipe for given loss of head. *Cornell civil engineer*, v. 27:83, 1919. Also in *Canadian engineer*, v. 37:148, 1919.
- The inverted weir. *Engineering news*, v. 73:72, 1915.
- On Lie's theory of continuous groups. *American journal of mathematics*, v. 22:60, 1900.
- A problem on the hydraulic resistance of a bridge over Chemung River at Elmira, N. Y., by S. C. George and E. W. Rettger. *Cornell civil engineer*, v. 27:119, 1919.
- Shorter proof of Castigliano's theorem. Church, I. P. *Mechanics of internal work. Note A, appendix.* 1910.
- The value of a hydraulic horsepower at the wheel. *Cornell civil engineer*, v. 28:62, 1919. Also in *Engineering and contracting*, v. 53, No. 2, 1920.
- Rice, F. E.** Milk with high apparent acidity. *Science*, v. 50:424, 1919.
- Ries, Heinrich.** Discussions: Hill, R. R. White clay possibilities of Pennsylvania. *American Ceramic Society. Journal*, v. 2:685, 1919; Lovejoy, E. Notes on fireclays of northern Appalachian coal basin. *Same*, v. 2:374, 1919.
- associate editor. *American Ceramic Society. Journal*, 1919-1920.
- Rogers, John.** Endocrine neuroses and their therapy. *New York medical journal*, v. 111:229, 1920.
- Ross, H. E.** Dairy industry for vocational schools. Boston, Houghton, Mifflin Co., 1920.
- Saby, R. S.** Danish parliamentary elections of 1918. *American political science review*, v. 13:656, 1919.
- Ithaca, N. Y., turns down Plan C. *National municipal review*, v. 8:452, 1919.
- A new election method in Denmark. *American Scandinavian review*, February, 1920, p. 132.
- The Non-partisan League in North Dakota. *North Star*, v. 2:11, January, 1920.
- Norwegian communal elections. *Proportional representation review*, January, 1920, p. 11.
- Sampson, M. W.**, co-editor. *Cornell studies in English*, 1919-1920.
- Sanderson, Dwight.** Democracy and community organization. *American Sociological Society. Proceedings*, v. 14:83, 1919.
- The farmer and child welfare work. *National Conference of social work. Proceedings of the 46th conference*, 1919, p. 26.
- Savage, E. S.** Home grown roughage and home grown grains. *Cornell veterinarian*, v. 10:83, 1920.
- Sawdon, W. M.** A brief review of some of the experiments on transmission of power by belting. *Sibley journal of engineering*, v. 34:3, 1920. Also in *Belling*, 5 December, 1919, p. 23.
- Schloss, O. M.** Allergy in infants and children. *American journal of the diseases of children*, v. 19:433, 1920.
- Schmidt, Nathaniel.** Review: Marburg, Theodore. League of Nations; its principles examined. Vol. II. *Cornell law quarterly*, v. 5:368, 1920.
- Schurman, J. G.** Twenty-seventh annual report by President Schurman, 1918-1919. Ithaca, N. Y., Cornell University, 1919. 63, xcviip. (Cornell University. Official publications, v. 10, No. 18.)

- The American university, today and tomorrow. *Indiana University Alumni quarterly*, v. 7:156, 1920.
- Commencement day address, June 23, 1920. *Ithaca journal-news*, 23 June, 1920.
- Ideal bonds of international union. *Pan American review*, v. 1, Nos. 12-13: 19, 1920.
- New public policies. *New York Press Association. Convention*, 1912, p. 35.
- Warning against class politics. *Ithaca journal-news*, 13 February, 1920.
- Scofield, H. H.** Two recent methods for porportioning concrete. *Cornell civil engineer*, v. 28:287, 1920.
- Scoville, G. P.** Potato production and price. *New York State Potato Growers Association. Proceedings*, v. 6, 1919.
- Price of potatoes. *Genesee County farm bureau news*, 19 November, 1919.
- Sharp, L. W.** How the plant produces seed. *Cornell reading course for the farm. Lesson 144:257*, 1919.
- Mitosis in osmunda. [Review] *Botanical gazette*, v. 69:88, 1920.
- Spermatogenesis in blasia. *Same*, v. 69:258, 1920.
- Also abstracts in *Botanical abstracts*, 1919-1920.
- Sharpe, F. R.** Certain types of involutorial space transformations, by F. R. Sharpe and V. Snyder. *American Mathematical Society. Transactions*, v. 20: 185, 1919.
- Certain types of involutorial space transformations; second paper, by F. R. Sharpe and V. Snyder. *Same*, v. 21:52, 1920.
- *associale editor*. *American Mathematical Society. Transactions*, 1919-1920.
- Smiley, E. M.** The phyllosticta blight of snapdragon. *Phytopathology*, v. 10:232, 1920.
- Smith, A. W.** Hail thou in majesty Cornell. *Ithaca, N. Y., Andrus & Church*, 1919. 20p.
- Smith, M. K.** Gunshot fractures of the humerus. *Annals of surgery*, v. 70:430, 1919.
- Open amputation through the knee-joint. *Same*, v. 70:287 1919.
- Snyder, Virgil.** Certain types of involutorial space transformations, by F. R. Sharpe and V. Snyder. *American Mathematical Society. Transactions*, v. 20: 185, 1919.
- Certain types of involutorial space transformations: second paper, by F. R. Sharpe and V. Snyder. *Same*, v. 21:52, 1920.
- *editor*. *American Mathematical Society. Bulletin*, 1919-1920.
- Spring, S. N.** Truth versus buncombe. *Cornell forester*, v. 1:8, 1920.
- Stephenson, J. W.** A brief résumé of neurological and psychiatric observations in a hospital center in France. *Archives of neurology and psychiatry*, v. 111:61, 1920.
- The intensive treatment of syphilis of the nervous system by neosalvarsan, intravenously, and mercury by inunction. *Medical record*, v. 85:786, 1914.
- Spinal decompression in meningomyelitis, by A. S. Taylor and J. W. Stephenson. *Journal of nervous and mental diseases*, v. 43:1, 1915.
- Stewart, F. W.** The development of the cranial sympathetic ganglia in the rat. *Journal of comparative neurology*, v. 31:163, 1920.
- Stewart, R. M.** The vocational teacher and the study problem. *Albany, N. Y., New York State Department of Education*, 1920. 16p.
- Stillman, R. G.** The army laboratory and the prevention of infectious disease. *Medical record*, v. 95:996, 1919.
- The broader aspects of hematological diagnosis, by E. E. Butterfield and R. G. Stillman. *American journal of the medical sciences*, v. 154:783, 1917.
- The laboratory service in the A. E. F. *Medical record*, v. 96:500, 1919.
- Stimson, P. M.** Multiple cartilaginous exostoses, with a discussion of the pathology and a case report. *Archives of pediatrics*, v. 34:338, 1917.
- Stockard, C. R.** Effects of underfeeding on ovulation and the oestrous rhythm in guinea-pigs, by G. N. Papanicolaou and C. R. Stockard. *Society for Experimental Biology and Medicine. Proceedings*, v. 17, 1920.

- The laboratory professor and the medical sciences in the United States. *American Medical Association. Journal*, v. 74:229, 1920.
- Proceedings of the American Association of Anatomists, 36th session. *Anatomical record*, v. 18:211, 1920.
- The vaginal closure membrane, copulation and the vaginal plug in the guinea-pig, with further considerations of the oestrous rhythm, by C. R. Stockard and G. N. Papanicolaou. *Biological bulletin*, v. 37:222, 1919.
- Strong, L. W.** Physiology and pathology of the endometrium. *New York State journal of medicine*, v. 19:289, 1919.
- Strunk, William, jr.** The elements of style. [2d ed.] Ithaca, N. Y. Privately printed, 1919. 43p.
- The faculty point of view. *Cornell era*, v. 52, No. 7:7, 1920.
- Public opinion demands ratification. *Cornell daily sun*, v. 40, No. 77:1, 10 January, 1920.
- Sunderville, E.** Review: Bradley, O. C. The topographical anatomy of the horse. *Cornell veterinarian*, v. 10:157, 1920.
- Sweet, A. H.** The English Benedictines and their bishops in the thirteenth century. *American historical review*, v. 24:565, 1919.
- Review: Furness Abbey, Lancashire, Eng. The Couches book. *Same*, v. 25:132, 1919.
- Taylor, A. S.** Brachial birth palsy and injuries of similar type in adults. *Surgery, gynecology and obstetrics*, v. 30:494, 1920.
- Thilly, Frank.** Report of the Dean of the College of Arts and Sciences. *Cornell University. Official publications*, v. 10, No. 18: Appendix III, 1919.
- The teaching of philosophy. *Klapper, Paul*, ed. *College teaching*, p. 302, 1920.
- Reviews: Perry, R. B. The present conflict of ideals. *Philosophical review*, v. 29, pt. 2:184, 1920; Ruggiero, Guido de. *Storia della filosofia. Parte prima: La filosofia graeca*. 2v. *Same*, v. 29, pt. 1:99, 1920.
- Thompson, W. G.** Chronic anilin poisoning. *Medical record*, v. 97:401, 1920.
- Thompson, W. S.** Race suicide in the United States. *American journal of physical anthropology*, v. 3:96, 1919.
- Thro, W. C.** Calcium in the blood in some diseases of the skin, by W. C. Thro and Marie Ehn. *Society for Experimental Biology and Medicine. Proceedings*, v. 17, No. 6, 1920.
- Titchener, E. B.** Notes from the Psychological laboratory of Cornell University. *American journal of psychology*, v. 31:212, 1920.
- Psychical research, by E. B. Titchener and H. P. Weld. *New international year book*, 1919, p. 545.
- Psychology, by E. B. Titchener and H. P. Weld. *New international year book*, 1919, p. 546.
- Sir Thomas Wrightson's theory of hearing, by E. B. Titchener and E. G. Boring. *American journal of psychology*, v. 31:101, 1920.
- *American editor*. Mind, a quarterly review of psychology and philosophy, 1919-1920.
- *associate editor*. *American journal of psychology* 1919-1920.
- *editor*. Studies from Cornell University psychological laboratory, edited by E. B. Titchener and H. P. Weld.
- Bassett, M. F., and Warne, C. J. The lapse of verbal meaning with repetition. *American journal of psychology*, v. 30:415, 1919. (No. 128.)
- Cowdric, M., and Winfield, M. The adjustment of the Hering color-blindness apparatus. *Same*, v. 30:418, 1919. (No. 129.)
- Straus, H. H., and Uhlman, R. F. Adaptation of superficial pain. *Same*, v. 30:422, 1919. (No. 130.)
- Sheppard, H. Foveal adaptation to color. *Same*, v. 31:34, 1920. (No. 131.)
- Bowman, A. M. Size vs. intensity as a determinant of attention. *Same*, v. 31:87, 1920. (No. 132.)
- Hoisington, L. B. On the non-visual perception of the length of lifted rods. *Same*, v. 31:114, 1920. (No. 133.)

- Torrey, J. C. An experimental study of the effect of autogenous *B. coli* vaccines on the intestinal colon bacilli of dogs, by J. C. Torrey and A. H. Rahe. *Journal of immunology*, v. 5:133, 1920.
- Trevor, J. E. Certain mathematical features of thermodynamics. *American mathematical monthly*, v. 27:258, 1920.
- Heats of dilution. *Same*, v. 27:55, 1920.
- A property of homogeneous functions. *Same*, v. 26:444, 1919.
- Troy, H. C. A comparative study of some methods for determining the fat content of skim-milk, by T. J. McInerney and H. C. Troy. *Cornell University. Agricultural Experiment Station. Bulletin* 401:69, 1920.
- A comparison of fat tests in milk as determined by a cow-testing association and by a creamery. *Same*, No. 400:3, 1920.
- The apparent acidity of milk. *Cornell countryman*, v. 17:319, 1920.
- Udall, D. H. Acute indigestion in ruminants. *Cornell veterinarian*, v. 10:132, 1920.
- Case records, digestive system. *Same*, v. 10:40, 1920.
- editor. *Cornell veterinarian*, 1919-1920.
- Upton, G. B. Investigation of the muffling problem for airplane engines, by G. B. Upton and V. R. Gage. *National Advisory Committee for Aeronautics, 5th annual report. Report No. 55*, 1919.
- Lubrication and lubricants. *Sibley journal of engineering*, v. 34:58, 1920.
- Usher, A. P. An introduction to the industrial history of England. Boston, Houghton, Mifflin Co., 1920. 529p.
- Review: Hammond, M. B. British labor conditions and legislation during the war. *Cornell law quarterly*, v. 5:495, 1920.
- Volkert, R. M., editor. *Cornell forester*. Vol. 1. 1920.
- Wann, F. B. The fixation of free nitrogen by green plants. *Science*, n.s., v. 51:247, 1920.
- Ward, G. G., jr. Hospital standardization in the Woman's Hospital in the State of New York. *Modern hospital*, v. 14, No. 4, April, 1920.
- Practical application of methods of standardization to the hospital. *New York medical journal*, v. 111:441, 1920.
- The teaching function of the hospital, with special reference to gynecology. *Medical record*, v. 96:909, 1919.
- Warner, A. J. Economics of good furnishing. *Cornell reading course for the home. Lesson 132, August*, 1919.
- Way, W. D. Coccidiosis in cattle, by W. D. Way and W. A. Hagan. *Cornell veterinarian*, v. 10:117, 1920.
- Weeks, L. G. Some observations on Mexico and her people. *Outcrop*, 1 June, 1920.
- Weld, H. P. Psychical research, by E. B. Titchener and H. P. Weld. *New international yearbook*, 1919, p. 545.
- Psychology, by E. B. Titchener and H. P. Weld. *New international yearbook*, 1919, p. 546.
- associate editor. Studies from Cornell University psychological laboratory, edited by E. B. Titchener and H. P. Weld. Nos. 128-133. *American journal of psychology*, v. 30-31, 1919-1920.
- Whetzel, H. H. The present status of dusting. *New York State Horticultural Society. Proceedings of the 2d annual meeting*, 1920, p. 45.
- This season's Annapolis Valley fruit crop. *New York State fruit grower*, January, 1920, p. 10.
- Whiting, Frederick. A consideration of the latent stage and of the period of reinfection in mastoiditis due to streptococcus mucosus capsulatus. *Congress of American Physicians and Surgeons. Proceedings*, October, 1919.
- The unreliability of temperature in the otitis of infants and young children as an indication for the mastoid operation. *Same*, October, 1919.
- Wiegand, K. M. Eupatorium purpureum and its allies. *Rhodora*, v. 22:57, 1920.
- A new species of spergularia. *Same*, v. 22:15, 1920.
- Variations in lactuca canadensis. *Same*, v. 22:9, 1920.

- Willcox, W. F.** Comment on resignation of President Schurman. *Cornell daily sun*, 16 February, 1920.
- Final report, Disbursements Committee, Tompkins County War Chest. *Ithaca journal-news*, 24 March, 1920.
- Health of country children. [Letter]. *Same*, 4 February, 1920.
- Obituary note upon Anders Nicolai Kiaer. *American Statistical Association. Publication*, v. 16:440, 1919.
- Opinion regarding treaty ratification. [Letter]. *Cornell daily sun*, 8 January, 1920. Also in *Ithaca journal-news*, 8 January, 1920.
- B. Health of the army; a comparative study, 1820-1917, [by W. F. Willcox], U. S. Surgeon-General. *Annual report to the Secretary of War for 1918*, p. 21.
- editor. Kiaer, A. N. Attempt at a determination of the birth rate in the U. S., edited with critical notes by W. F. Willcox. *American Statistical Association. Publication*, v. 16:442, 1919.
- Reviews: Cooley, Charles H., editor. Social process. *Philosophical review*, v. 28:323, 1919; Economic statistics; preliminary vol. No. 1. *American Statistical Association. Publication*, v. 16:484, 1919; Whipple, G. C. Vital statistics. *American economic review*, v. 9:876, 1919.
- Williams, W. L.** Surgical and obstetrical operations, by W. L. Williams with the collaboration of James N. Frost. 4th revised ed. Ithaca, N. Y. The author, 1919. 196p.
- Cervicitis. *New York State Veterinary College. Annual report, 1918-1919*, p. 116.
- Death and maceration of fetuses of swine. *Same, 1918-1919*, p. 122.
- The diseases of bulls. *Cornell veterinarian*, v. 10:94, 1920.
- Diseases of the genital organs of sheep associated with abortion. *New York State Veterinary College. Annual report, 1918-1919*, p. 125.
- The experimental evidence of the power of the B. abortus of Bang to cause abortion. *Same, 1918-1919*, p. 101.
- The nature of contagious, infectious, or epizootic abortion in cattle. *Same, 1918-1919*, p. 110.
- Researches in the diseases of breeding cattle with observations upon the diseases interfering with reproduction in sheep and swine, by W. L. Williams and C. M. Carpenter. *Same, 1918-1919*, p. 91.
- A standard for measuring the reproductive and dairying efficiency of cattle. *Same, 1918-1919*, p. 92.
- White or calf scours, by W. L. Williams, W. A. Hagan, and C. M. Carpenter. *American Veterinary Medical Association. Journal*, v. 57:124, 1920. Also in *Ohio State University. Veterinary alumni quarterly*, v. 7:305, 1920.
- Wilson, B. D.** The formation of nitrates in a soil following the growth of red clover and of timothy, by F. L. Lyon, J. A. Bizzell, and B. D. Wilson. *Soil science*, v. 9:53, 1920.
- Woodruff, E. H.** History of the Cornell Law School. *Cornell law quarterly*, v. 4:91, 1919.
- Review: Anson, Sir William. Principles of the law of contract. 14th English ed.; 3d American ed.; edited by A. L. Corbin. *Same*, v. 5:222, 1920.
- Works, G. A.** Future problems of state and national administration of vocational education. *National Society for Vocational Education. Proceedings*, 1920.
- The point of view of the teacher of vocational agriculture. *University of Illinois. High School Conference. Proceedings*, 1919.
- A suggestion regarding the organization of courses in colleges of agriculture. *School and society*, v. 11:144, 1920.
- Worthen, E. L.** Illinois soil system can't be "scrapped." *Prairie farmer*, v. 91:206, December, 1919.
- Teachings of the Pennsylvania plats. *Pennsylvania farmer*, v. 46:645, December, 1919.
- Wright, A. H.** The Dickassel in Virginia. *Auk*, v. 36:575, 1919.
- Henslow's sparrow in New York and Virginia. *Same*, v. 36:574, 1919.

- The salamanders of Monroe and Wayne Counties, N. Y., by A. H. Wright and Julia Moesel. *Copeia*, No. 72:63, 1919.
- The toads and frogs of Monroe and Wayne Counties, N. Y., by A. H. Wright and Julia Moesel. *Same*, No. 71:81, 1919.
- The yellow-throated warbler in Central New York. *Auk*, v. 36:586, 1919.
- Wright, Ivan.** The federal reserve banking system's contribution to agricultural finance. *Bankers magazine*, July, 1919.
- Credit rating the farmer, the connecting link of agriculture, commerce and industry. *National Association of Credit Men. Bulletin*, v. 21, July, 1919.

